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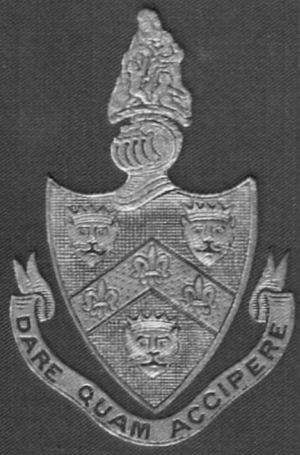

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B. L. Laver

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Passim.

DURING the past few months the R.A.M.C. authorities have been pressing their claim for the services of all fit men as soon as they qualify with more insistence than in the earlier years of the war. They still, however, allow the system of three months' honorary commissions while a house appointment is being held. Guy's men as they qualify are now faced with the problem of deciding whether they ought to join the army at once or take the three months' house appointment allowed them by the authorities. In our opinion the latter course is the one which will benefit both the hospital, the individual, and the army. One is often told by practitioners of considerable experience that they did not really learn anything until they began doing a house appointment, and there can be no doubt that in the long run the R.A.M.C. will be all the better and more efficient if all those who join it have had three months' qualified experience. Further, we must not forget that the hospital cannot be run without a certain number of resident qualified men, and we consider that every man here whom the hospital authorities consider suitable for a resident appointment, should sacrifice his natural desire to see something of the war the moment he is qualified, and should not grudge three months spent in the service of the hospital to which he owes so much.

A further problem arises for those of us who are unfortunate enough to be medically rejected by the Naval and Military authorities. They have the opportunity of continuing to do indispensable appointments here for longer than the normal three months. They are thus able to do work of truly national importance. Guy's men are famous for their loyalty to their hospital, and we feel sure that the present generation will do their utmost to maintain its high traditions and to avoid the undesirable necessity of the importation of outside aid to fill resident appointments.

WE publish in another column the report issued by the Guy's Hospital Maternity Charity. This deals with the work done on the "Nurses' side" of the District. It is very gratifying to hear that a Baby Clinic has been established in St. Thomas's Street. We feel sure that this will do a great deal of good in the education of the mothers in the care of their infants. A certain amount of pre-natal work is now being done, and an attempt is being made to visit every prospective mother before her confinement. Unfortunately at present the babies on

the "Externs' side" do not participate in the advantages of the St. Thomas's Street Clinic owing to lack of space. Since the New Year patients who apply for cards for the Maternity Charity have been seen by a qualified lady doctor. This is a great advance over the old system of card distribution, but we regret that the duty of seeing all those who apply for cards is not made part of the appointment of Obstetric Dresser. About 40 to 50 maternity cards are issued weekly and it seems that there would be no real difficulty in arranging two clinics a week at which all women who apply for cards could be seen by the R.O.'s with the Queen dressers in attendance. The cards issued might be slightly modified so as to contain a space for any notes of previous labours or difficulties, which might be of help to the extern when labour commences. Patients seen at this Clinic who needed supervision or treatment could be given cards for Gynæcological O.-P.'s or for the new Gynæcological Department started recently under the Local Government Board scheme.

THE effect of the war in reducing the number of taxicabs plying for hire is being felt by those whose duty it is to have patients transported at night either to or from the hospital. We have even heard of patients being brought in from the District on theatre trolleys after all attempts to obtain a more suitable vehicle had failed. At night patients who are being sent to an Infirmary may have to wait hours before any conveyance can be found for them. We do not know how much the Hospital spends annually on cab and taxi fares, but there can be no doubt that if a hospital ambulance could be maintained a great deal of trouble and anxiety would be avoided. A light motor ambulance, such as the Ford, can be bought for a comparatively small sum, and we can hardly believe that the cost of running it would be prohibitive.

WE have received from the Royal Institute of Public Health the programme of a course of lectures on "Public Health problems under war and after-war conditions." The lectures will be delivered in the Lecture Room of the Royal Institute of Public Health at 37, Russell Square, W.C. The first lecture is on Wednesday, January 17th, at 4.0 p.m., on the Principles of Organisation and Administration in Child Welfare Work, by *Miss Janet Lane-Claypon, M.D., D.Sc.* There will be lectures at 4.0 p.m. on all Wednesdays during January, February, and March. Full particulars may be obtained on application to the Secretary, the Royal Institute of Public Health, 37, Russell Square, W.C.

WE publish with this issue a reproduction of the photograph of the Niggers taken on Christmas Day. In addition to their performance in the wards they paid a visit to the Hampstead Military Hospital, where they were much appreciated.

Ward Concerts.

ADDISON.

The Addison concert was held on Friday, Dec. 29th, and was a great success. The proceedings opened with an instrumental trio, followed by songs and sketches by outside and local talent. Our thanks are due to the following artistes:—Miss Irene Vickeridge, Miss June McKibbin, Miss Addenbroke, Miss Vera Christmass, Miss Phyllis Banister, and Mr. Alton, who largely contributed towards the success of the concert, although the local stars "did their bit." The audience thoroughly appreciated the humorous sketch by Messrs. Philips, Gathergood, Medlock and Micklem, the topical hits being received with loud applause, while Messrs. Woodruffe and Forbes, as officers of the Metropolitan Police Force, brought down the house. It is unnecessary to add that Mr. Wilson was well received in "Another little drink."

A very excellent tea was provided by Sister Addison during the interval. Our thanks are also due to Mr. A. R. Doyle for the very able manner in which he conducted the concert.

C. G. COOMBS. R. W. WARRICK. C. L. CURLE. J. KENDALL. H. S. VERTUE. J. VICTORY.

C. W. W. ARMSTRONG. W. R. G. HEARNDEN. H. L. THORN. J. R. COX. J. T. T. FORBES. A. MAGILL. C. H. LAVER, B. RAMIREZ. J. C. GIE. L. GILL.

S. WILSON. L. S. GATHERGOOD. P. G. McEVEDY. I. R. R. BROGDEN. C. H. MEDLOCK. E. S. PHILLIPS. E. S. BOWES. R. QUESADA. R. R TRAILL. K. M. WOODRUFFE. T. E. MICKLEM

THE NIGGERS, 1916.

ASTLEY COOPER.

The Astley Cooper concert was held at 8 p.m. on December 30th, as New Year's Eve was on a Sunday. Though, as usual, the greater part of the programme was filled by local talent, a few from the outer world were kind enough to help in the entertainment, and these items were very much appreciated by all present.

The ward was tastefully decorated, and the stage was festooned with patriotic flags. The seating accommodation, though very extensive, was not quite sufficient to meet the very considerable demands put on it.

The programme was opened by Mr. Siggs at the piano. Unfortunately not everybody could enjoy this talented performance, owing to late arrivals. Among the items included in the first half of the programme were violin solos by Miss Fishbein, which were enthusiastically encored. Lieut. Bates, from the Officers' Section, as a raconteur, was much appreciated. Songs by Miss Carter, Miss Fuller, and Mr. Harrington were a great success. About the latter, one lady was heard to say that she could always spot a professional. Also before the interval some effective recitations were given by Miss Cave. The Nursing Staff were ably represented by Nurses Gibson, Sugars and Wadlow, who sang solos and a duet. We regret that we do not have an opportunity of hearing them more often.

After an interval for refreshments, during which Messrs. Kendall and Siggs played the piano, the concert was continued largely by local talent, with a considerable number of topical songs. Messrs. Knott and Woodruffe sang "Carry On," when they could remember the words. It may be said to their credit, or otherwise, that they looked their parts. Messrs. Woodruffe and Forbes gave their already famous impersonation of the Borough police. They were followed by Mr. Wilson, as a real gentleman, who sang "Another little drink would not do us any harm," and did it so realistically that he was nearly removed by the policemen, who had just finished their performance.

The topical songs were a great success in spite of the fact that few of them were many hours old. The old custom of an Extern's song was revived by Messrs. Coombs, Laver and Magill, who were received with great applause. The last turn was the overworked quartette, Messrs. Medlock, Gathergood, Micklem and Phillips, whose performance was a worthy conclusion to a most successful entertainment.

Sister Maher and Mr. Brogden are to be heartily congratulated on the admirable way in which the concert was arranged.

CLINICAL.

Clinical concert was held on Thursday, Dec. 28th. Such a bald statement of fact covers everything, from the feverish and scurrying sandwich makers, the equally feverish but rather tank-like transporters of chairs and movers of beds, to the artistes and the throng who enjoyed their various efforts.

Let us begin at the beginning. Did anyone see the poster?—a work of art by an artist, and rivalled only by one other, and this was by the same artist, and so not a fair rival. Who could fail to have observed the beeswax on the floor of the entrance passages, and the mats so cunningly placed that the unwary was instantly placed in a recumbent position? What person could be so unappreciative as not to have been enthralled by the festoons of ivy suspended from prodigious heights and breaking the monotony of the ward by their sweeping curves? It will be of interest to record that ample provision was made for immediate trephining of anyone who should be compressed by the descent of these charming bows—a habit that they had contracted, no doubt, because they were strung together with German wire.

When well inside the ward, the eye was fixed by the peculiarly vivid flowers, which were held, by those who were connoiseurs, to "relieve" the scheme of decoration. These flowers were a hybrid between a chrysanthemum and a gladiolus, being scarlet in hue and about the size of an average wedding bouquet. A mere amateur in the craft suggested that the scheme of decoration must have been relieved indeed!

As to the performance, a mere recital of names and songs would be pointless to those who had not the advantage of hearing the same, and quite superfluous to those who were present; if the former are curious, the latter are only too willing to give any and all information.

One thing of extreme interest arose out of this concert, and one which other would-be concert holders would do well to copy:—We are informed on most reliable grounds that Sister gave all the children a sound dose of Ol. Ric. before the concert, as a prophylactic measure, so to speak.

ESTHER.

On Friday, 29th December, there was held in Esther a Concert, which consisted, as most concerts do, of the performances of sundry individuals taken in series and sometimes in combination; some there were who sang, some attempted the same, but must not be blamed for what after all, is not a self-controlled deficiency; there was one who talked, presumably lacking altogether the power of producing a melodious noise. On the other hand two persons displayed a considerable degree of physical as well as musical training in some gymnastics on a piano and cello respectively. Apropos of the piano, reposing as it was in apparent comfort on the stage, few of those who admired its elegant construction, or, possibly, its magnificent tone, realised that the instrument weighed half a ton, and had been transported up four flights of stairs by ten heated but triumphant males; nor could they guess that in its playful elephantine manner it had caused perforation and threatened acute collapse of the stage at any moment. Why should they?

The audience at any concert is not there to ponder over such things, but merely to criticise a performer's efforts or her personal appearance, or on the other hand to compare the show as a whole with that of other Wards.

The Ward was decorated in a manner typical of Guy's in blue and yellow; the blue varying from navy to mauve according to the particular batch of crinkled paper kept by the successive stationers whose stocks seemed remarkably low; the yellow was modified to orange so that the real article might be suspended over each patient or spiked on pieces of wire fixed to a respectable laurel and set in a flower pot, the whole masquerading as an orange tree in full fruit.

The concert itself was remarkable for one fact which is unparallelled in the annals of Guy's in that all the permutations and combinations of quondam Niggers, who had so kindly said that they would turn up, actually *did* turn up, and *mirabile dictu*, were punctual.

Pass List.

University of London.

M.B., B.S. FINAL EXAMINATION.

At the Examination held recently, H. Bevan Brown was successful.

M.B. FIRST EXAMINATION FOR MEDICAL DEGREES.

The following Candidates were approved by the Examiners at the last Examination:—J. A. Currie, G. E. W. Felce, J. B. McCann, T. A. Shaw, G. M. Stoker, W. H. Summerskill, L. R. A. Wells.

Royal College of Surgeons of England.

At a Council held on December 16th, Licences in Dental Surgery were conferred upon the following Candidates, who have passed the requisite Examinations and complied with the bye-laws:—A. H. Bowes, W. A. Cooper, R. L. Conley, L. H. Dixon, P. Green, C. F. Hawkins, P. H. Marsh, W. Mercer, F. R. Salsbury, S. Sanders, J. A. S. Wright, G. W. Wheldon, W. R. Wotton, H. Wallis.

University of Cambridge.

SECOND EXAMINATION FOR MEDICAL DEGREES.

Michaelmas Term. Anatomy and Physiology.

At the Examination held recently, P. J. Briggs (Christ's College) and W. R. Carling (Emmanuel) were approved.

An Extreme Case of Ileo-colic Intussusception.

THE publication in the GAZETTE, by Mr. O. V. Payne, of two unusual cases of intussusception, has prompted me to send notes of a case which has recently occurred in this Institution, and illustrating the extent to which a case, unrecognised in the early stage, may progress in a relatively short time.

A baby. æt. 6 months, breast-fed and well nourished, was taken ill on November 1st, with an acute attack of gastro-enteritis. The child began to waste rapidly, and on November 5th a little blood and mucus followed a fluid evacuation of the bowels, but this ceased on November 7th. On November 12th a prolapse appeared at the anus which is said to have returned immediately after its "reduction." The child was now brought to the hospital as an intussusception and admitted as such. I saw the child shortly after its arrival, by which time emaciation was extreme, the abdomen greatly distended, and a prolapse of about two inches of bowel at the anus. The child was practically "in extremis." When the abdomen was opened the tumour was found to occupy the left side exclusively, the distended ileum entering the colon at the splenic flexure. The whole intussusception was reduced by massage aided by a nurse with a finger in the rectum. When finally reduction was completed, the anatomy of the condition was found to have been as follows:—The ileum was protruded through the ileo-cæcal valve to the extent of about six inches, and the whole of this intussusception, as is not uncommon in the ileo-colic variety, now became the intussusceptum of a secondary invagination into the ascending and transverse colon, ultimately reaching the splenic flexure. The prolapse at the anus was represented by the lower end of the ileum in the primary intussusception.

The gut was naturally in an unsatisfactory condition, although not, perhaps, as bad as might have been expected, but, in any case, further operative interference was out of the question. The child died on the following day.

I repeat that interest attaching to this case lies, firstly, in the fact that the true ileo-colic variety in itself is not common, and, secondly, the degree to which the condition had progressed.

NORMAN FLOWER,
Assistant Surgeon, Yeovil and District Hospital.

An Account of an Abdominal Case of Interest with some Criticisms.

Complications following Operation for Chronic Duodenal Ulcer.

Mr. P., æt. 59, consulted me first at the beginning of January, 1914. He was a small man, emaciated to a degree. He gave a characteristic history of duodenal ulceration, extending over nearly thirty years, during which period there had been frequent attacks of melæna. He made no attempt to adhere to the diet prescribed for him, and early in the following month he had such a profuse attack of melæna that it all but cost him his life. On February 25th he was transferred to the nursing home, and on the following day I opened the abdomen with a view to doing a posterior gastro-enterostomy. It was at once apparent that at some previous date there had been a subacute perforation of an ulcer, for there were present throughout the abdomen numerous adhesions, and both pylorus and first part of the duodenum were completely obscured from view. Some difficulty was experienced in raising the transverse mesocolon, and when the lesser sac was opened it was found that it, too, had participated in the inflammatory process. The customary "no-loop" anastomosis with vertical opening was made, and after inspection of the gall-bladder and appendix the abdomen was closed. For five days the patient did well, but then commenced biliary vomiting. I had a very shrewd suspicion as to what was happening, and, after washing out the stomach twice daily for four days without permanent benefit, this suspicion now almost amounted to a certainty, viz., that the afferent limb had in some way become involved in the adhesions. I accordingly reopened him on the left side, and this was precisely what was found, the adhesions producing an obstruction by effecting a partial axial rotation of the afferent limb. There was barely sufficient room on the proximal side of the stoma to apply a small curved clamp, but a short circuit was eventually accomplished between the afferent limb and the next loop of jejunum. The abdomen was closed and the stitches of the first operation on the other side of the middle line were removed at the same time.

All vomiting ceased forthwith and the patient was now quite comfortable. Two days later I received an urgent summons in the middle of the night, and, on arrival found that, as a result of a fit of coughing, the first wound had completely broken down and there were two coils of small intestine in the bed. Owing to the condition of the patient a general anæsthetic seemed contra-indicated, so an injection of morphia was given, the gut returned, and the wound closed with half a dozen through-and-through stitches. There was no sign of deep union whatever, and the deep catgut sutures had already disappeared.

From now recovery was uneventful until two days before the date fixed for the patient to return home. He was sitting out, chatting with

his visitors by the open window, and the same evening complained of a stiff neck. Next morning his temperature rose to 102° F. and he was found to have a right-sided lobar pneumonia. On the eighth day there was no crisis and the physical signs were suggestive of fluid. I explored the chest over the dull area and drew blank. In forty-eight hours the condition was unchanged and the patient was obviously in a very critical state. This time I rotated the scapula forwards and explored over a semi-resonant area beneath it, and there was found the pus. Eleven ounces of this was slowly aspirated as a temporary measure and, by request of the anæsthetist, the resection of a rib postponed for a few hours. This was then quickly carried out and free drainage obtained.

The ultimate condition of this patient leaves nothing to be desired, and at the time of writing he is putting on weight with the utmost regularity, at the rate of $2\frac{1}{2}$ lb. to 3 lb. a week.

Present condition (November, 1916).—This patient is now in most excellent health (nearly two years after his operation). Almost all his employees are serving in the army, and much heavy work has fallen upon his shoulders, but this he is able to do without discomfort.

NORMAN FLOWER,
M.A., M.B., B.Ch.,
Assistant Surgeon Yeovil Hospital.

Change of Address.

Capt. H. Bevan Brown, R.A.M.C., from Royal Flying Corps, Beaulieu, Hants, to Bovington Military Hospital, Wool, Dorset.

Surgeon Douglas A. Mitchell, M.B., B.S., R.N., from R.N. Hospital, Malta, to H.M.S. *Diamond*, c/o G.P.O.

Lieut.-Colonel E. C. Hare, I.M.S., The County Asylum, Devizes, Wilts.

Cadet J. A. Bouic, Royal Flying Corps, Exeter College, Oxford.

C. L. Odam, M.R.C.S., L.R.C.P., Officers' Quarters, University War Hospital, Southampton.

Appointments.

R.A.M.C.

The following appointments have been made:—

Temp. Lieutenants to be temp. Captains:—A. J. Beadel, A. Davidson, C. H. Mossop, H. Mather, P. D. Scott, S. Copley.

To be temp. Captains:—J. G. Taylor, S. E. Denyer, C.M.G.

To be temp. Lieutenants:—F. A. Godson, B. Muir.

Temp. Captains relinquishing their Commissions:—C. Weller, W. P. H. Munden.

Temporary Lieutenants relinquishing their Commissions:—W. E. Plummer, R. Roberts.

Army Dental Appointments.

Temp. Lieutenant to be temp. Captain:—E. L. Pilbeam.

Captain H. J. Dear, London Regiment, to be temp. Major, and to vacate appointment of Adjutant.

The following have been appointed Army Dental Surgeons with the rank of temp. Lieutenants:—L. C. Cohen (from R.A.M.C.), E. P. Deverall, C. E. Lloyd, F. W. Parfitt.

Hon. Captain A. F. A. Howe to be temp. Lieutenant (substituted for notification in *Gazette* of Nov. 28th),

Volunteer Force.

H. W. Greaves-Morris to be temp. Lieutenant, Bedfordshire Volunteer Regiment.

Guy's Hospital Appointments.

The following appointments have been made in connexion with the scheme for the diagnosis and treatment of venereal diseases:—

Assistant to the Obstetric Surgeons:—Miss Morna Rawlins, M.B., B.S. Lond.

Assistant to the Dermatologist:—Mr. L. S. Gathergood, M.R.C.S., L.R.C.P.

Assistant to the Genito-Urinary Surgeon:—Captain G. E. Genge-Andrews, M.B., B.S. Lond.

Assistant Bacteriologist:—Miss Una Griffin, M.B., B.S. Lond.

Civil.

Arnold Alcock has been elected Hon. Surgeon to the Gloucestershire Royal Infirmary.

C. L. Odam, M.R.C.S., L.R.C.P., has been appointed Civil Medical Practitioner at the University War Hospital, Southampton.

Weil's Disease: Infectious Jaundice: Febrile Jaundice.

BY DR. P. P. LAIDLAW.

INFECTIOUS jaundice is one of the diseases which has recently been thrust into prominence, partly owing to the fact that it is one of the "war diseases," and also because considerable advances have been made in the pathology of the condition during the last two years. It had been suspected for some time that certain cases of jaundice were infective, and in 1886 Weil described some cases which were apparently infectious and were characterised by sudden onset, fever, jaundice, swelling of the liver and spleen with tenderness, and acute nephritis. Since then other observers have described epidemics of a similar nature, and most German physicians have regarded the disorder as a distinct, infectious, disease; and some have thought that a few of the epidemics could be traced to bathing in certain waters. While the German schools have looked upon this disorder as a separate entity, others have been unconvinced, and saw no sufficient reason to separate off these cases from the other jaundices of unknown origin, which in symptomatology resembled Weil's cases fairly closely. Some have denied that Weil was the first to describe the particular type of jaundice which is associated with his name and have claimed priority for others. These are matters of historical interest, no doubt, but of comparatively small importance now, since it has been shown that it is possible to separate off a group from that mass of cases of jaundice of unknown origin which extends from catarrhal jaundice, on the one hand, to acute yellow atrophy of the liver, on the other. This separation was rendered possible and placed on a sound pathological basis by the work of several Japanese investigators, who were able to show that acute infectious jaundice was due, in many cases, to infection with a particular variety of spirochæte. This spirochæte produced a constant type of disease in guinea-pigs very similar to that seen in man. The human cases correspond very well with those described by Weil.

We owe a great deal to the Japanese workers for their brilliant researches on this subject, and just as they were first in the field, so they remain in advance of everyone else at the present time. Their work was originally published in Japanese journals (1915), and thus did not, at first, gain widespread recognition. However, a summary of their work was published in the "Journal of Experimental Medicine" (1916), and since then new facts have been added by the same workers and others.

Cases of what appeared to be acute infectious jaundice occurred amongst the troops on the western front, and they were examined by Capts. Stokes and Ryle. Their results showed that these cases were further examples of a spirochætal infection, and this was apparently the same as that occurring in Japan. Their work has amply confirmed the results of the Japanese authors in many important particulars, and shows that the disease is widespread. Further, their latest results indicate that there may be a still greater extension at any time.

Huebener and Reiter of Berlin (late in 1915 and after that) record the infection of guinea-pigs with bloood from cases of Weil's disease. In the infected guinea-pig a spirochæte has been demonstrated.

Moreschi and Carpi have also recently described the infection of guinea-pigs from cases of infectious jaundice occurring on the Italian front. In one case a spirochæte was found.

These results make one wonder if a spirochætal infection is not the true cause of all cases of acute febrile jaundice. Further work is wanted before any definite conclusion can be arrived at, but there are indications that the spirochæte will only account for a small group of cases and that other examples exist having a distinct pathology. The matter will be clearer after the main features of spirochætal jaundice have been reviewed.

The attention of the Japanese investigators was drawn to the subject of infectious jaundice because the disease is common in certain parts of Japan and it has given rise to several epidemics. The disease, as it occurs there, is, moreover, a severe one with a mortality of about 32 per cent. It corresponds closely to that described by Weil and they regard it as identical. The cases described by the European workers are obviously similar if not identical, but the mortality is lower, being somewhere about 5 per cent. (Stokes and Ryle).

The onset of the disease is abrupt, with considerable fever. The patient feels ill, weak, and is prostrated from the outset. Vomiting may occur and the temperature reaches 103° F. or more quite early. The sickness, malaise, and temperature persist and a striking congestion of the conjunctivæ with small hæmorrhages develops, and remains for some days. Somewhere about the fourth day jaundice is noticeable. It may become intense, but is usually only moderately deep. Albuminuria (with casts) is present in most cases while in the severer examples hæmaturia may occur. The pulse is slower than might be expected from the temperature when the jaundice develops. In some cases the vomit is faintly blood stained and a small amount of sputum may be expectorated also streaked with blood. The patient complains of great malaise, sickness, pains in the head, eyes, and muscles. Swelling and tenderness of the liver and spleen is very variable. The Japanese authors state that only 10 per cent. of their cases show splenic enlargement.

The condition remains much the same for several days and tends to recovery in about nine to fourteen days. The temperature falls by lysis and the jaundice gradually disappears, leaving the patient very weak and somewhat anæmic. Relapses do not occur according to the majority of the Japanese workers, though an after fever may sometimes set in about the fourteenth day. In severe cases the hæmorrhages may be very striking, and in one fatal case which is described by Stokes and Ryle hæmorrhages were present throughout the body, and these, in their opinion, were largely responsible for the fatal result. However, this condition is unusual, and it must be regarded as exceptional in the European examples of the disease.

The discovery of the causative agent was due to the results following the inoculation of animals with blood from cases of infective jaundice. In 1914 Inada and Ido found that a guinea-pig which had been inoculated in this way developed jaundice and had spirochætes in the body fluids and in the liver. With this as the starting point these two observers and others found that the guinea-pig was the most susceptible to infection of the animals tried. It was found that a fair proportion of successful inoculations could be made if the blood were taken from human cases at an early stage in the disease. The chances of a "take" became smaller as the disease in man progressed; in every case where inoculation gave a successful result spirochætes could be demonstrated in the diseased guinea-pig, in the blood during life, and in the liver, kidney, and other tissues post-mortem. The spirochæte could be seen under dark ground illumination; or in films stained by Giemsa's stain; or, in sections of

tissue, the liver gives the best results, stained by the original Levaditi method, as for spirochæta pallida. The guinea-pigs became ill in from four to eight days depending on the path of inoculation, congestion of the eyes with hæmorrhages appearing about the same time. Jaundice developed in five to ten days, and in about 36 hours after this the animal usually died. The disease could be passed from animal to animal by suitable inoculation with ease and certainty.

In essential features the disease in man and in the guinea-pig is the same, but there are certain points of difference :—

1. Hæmorrhage is severer and more widespread in the guinea-pig than in man. Post-mortem the hæmorrhages are very striking and the lungs are very remarkable. They are mottled all over with hæmorrhages of varying size, giving the appearance of a beautiful butterfly's wings. In man hæmorrhages are usually few, small, and inconstant.

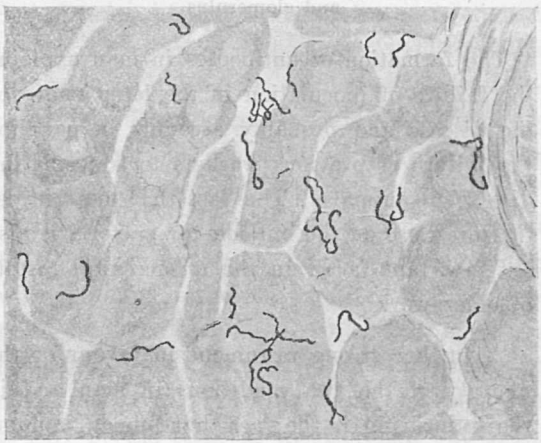
2. Spirochætes can always be found in the guinea-pig when inoculation gives a typical result which is not the case in man.

3. The spirochætes are present in the body fluids in the guinea-pig and in the cells in man.

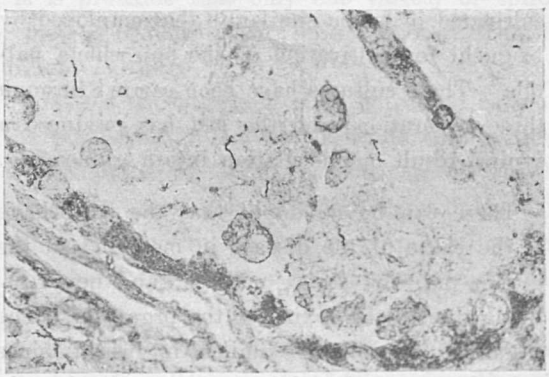
The second and third points of difference in the two cases, which at first sight appear to be arguments against the identity of the conditions, are readily explained. Man readily forms an antibody or antibodies for the infecting agent, and these appear in sufficient amount to be demonstrated on the fourteenth day. The antibodies cause death and lysis of the organisms. As they develop, therefore, the spirochætes will be killed off in large measure, and so will not be easy to find in the body fluids, and the older the case the fewer the organisms. They will, however, have a chance of survival in the body cells. Moreover, they have been found in the blood and tissues in man though the search for them is tedious and may necessitate the examination of a number of preparations.

The guinea-pig does not make antibodies at all readily, and thus they are present in his tissues and body fluids in large numbers; and corresponding with this the disease is usually fatal in this animal.

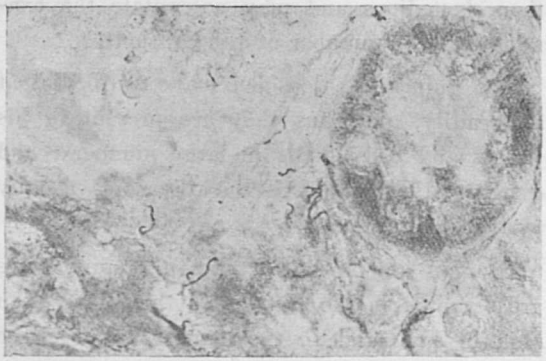
In man and in the guinea-pig spirochætes are excreted in the urine, and they have been seen in casts and in the urinary tubules (see microphotographs).



Camera lucida drawing of guinea-pig's liver, stained Levaditi method. Semi-diagramatic. To show various shapes of spirochætes. *Spirochæta icterohæmorrhagiæ.*



Guinea-pig kidney stained Levaditi method, to show excretion of spirochætes in tubule.



Same as above, to show spirochætes between tubula and glomerulus.

The formation of antibodies in man explains the failure of inoculation in the later stages of the disease and probably accounts in part for the failure of previous workers to transmit the disease to animals. The fact that most investigators were on the outlook for bacteria is also an important factor in the unsuccessful results of older work.

A further strong argument in favour of the identity of the two conditions in man and in the guinea-pig is the fact that human immune serum will protect, and in the earlier stages cure, a guinea-pig. Quite small doses of serum from a convalescent or recovered human case will protect. Again, the spirochæte has been cultivated in media similar to that employed by Noguchi for cultivation of the spirochæta pallida. These cultures have been carried through three generations and the last has produced a typical result on inoculation into a guinea-pig.

There can be no doubt that the spirochæte is the cause of the disease in man and in the guinea-pig, the fever, malaise, and nephritis, being due to the toxins of the organism. The jaundice is probably similar in origin, since spirochætes are found in enormous numbers in this organ, and there is no evidence of any biliary obstruction or massive necrosis of liver cells. It would seem as if the organism caused an abnormal excretion of the bile products into the body fluids. It is a point yet to be worked out.

The Japanese discoverers (Inada and Ido) have named the organism *Spirochæta Icterohæmorrhagiæ*, and the condition it gives rise to on infecting an animal *Spirochætosis Icterohæmorrhagica*. The names, though long and a little clumsy, are otherwise very suitable. The spirochæta is of the "snake" type as distinguished from the "cork-screw" type of which spirochæta pallida is the most important example. The twists and turns are quite irregular and coarse (see Figs.) It measures from 6-20μ in length and is less than ·25μ in thickness. This is the figure given for the stained organism, but as the usual methods exaggerate the true thickness it is probably much finer than this. Moreover, under the dark ground the organism is so fine that it is seen with difficulty, and always shows a peculiar beaded appearance as if composed of a long row of fine refractile drops. It grows best at a temperature of 25° C. in tissue ascitic broth, or other similar medium.

The natural path of infection is not yet established, but it is clear from direct experiment that infection may occur by the alimentary canal or by minute abrasions on the surface of the body. There is even good evidence that infection may occur through macroscopically sound skin within five minutes. Outside the body the organism will live for some time in water. In Japan, where the disease is endemic in the mines, great improvement in the incidence has followed the removal of the water as far as possible. The disease is correspondingly rare in the dry mines. It is interesting to recall that some of the earlier epidemics of Weil's disease were traced to particular waters.

Another site where the spirochæta has been met with naturally is the wild rat. This fact was recently emphasised by the Japanese authors and has also been discovered by Capt. Stokes* on the western front. The rat, although not so liable to acute disease as the guinea-pig, is subject to a chronic infection and excretes the spirochætes in the urine for a long time. In man and the guinea-pig a similar excretion of the spirochætes occurs, but the fact is not of such importance since the guinea-pig dies soon, and man forms antibodies and soon recovers or succumbs. If the trench rats are extensively infected (and Stokes' results indicate that the infection is fairly widespread) the disease may become disseminated and produce serious results.

So far no ideal method of treatment has been discovered. From analogy with other similar infections it might be expected that arsenical compounds were indicated, but the results of all those so far tried are disappointing. Salvarsan and its allies have not yielded strikingly beneficial results. From the effect of the serum of men, convalescent or recovered from the disease, in protecting or curing guinea-pigs it might be hoped that a serum treatment could be devised. The Japanese, again, have prepared sera which are giving very promising results, but it cannot yet be said that the treatment does all that is required. However, as the manufacture of the serum is still in its infancy much may be expected from work along these lines in the future. This point has a significance far outweighing the immediate problem, for the serum treatment of this type of infection (spirochætal ?protozoal) would be an immense advance.

Summing up the preceding, then, it may be taken as proved that there is a type of epidemic jaundice which is due to infection with a new variety of spirochæte. The disease is characterised by acute onset, fever, congestion of conjunctivæ with hæmorrhages, jaundice, and acute nephritis. In man the hæmorrhages are small and variable; in the guinea-pig they are striking.

It is very probable that the infections described by Stokes and Ryle are due to the same species of organism as that discovered by the Japanese workers, and, indeed, they themselves regard it as such. The organism, as far as it can be identified at the present time, seems the same. Through the kindness of Capt. Stokes two strains of the organism were studied in the Pathological Department. The results obtained confirmed the conclusions already arrived at. The illustrations are from preparations made from guinea-pigs infected with the strains so kindly supplied by Capt. Stokes.

In the case of the results of Huebener and Reiter it seems probable that they were dealing with the same organism. As they make no reference to the Japanese work, and make no comparison, the matter must have an element of doubt. And in the Italian work they hint that it may be the same as the German, but again make no reference to the Japanese. However, from such data as are to hand (description of organism, animals which can be infected, etc.) it is probable that only one variety of spirochæte is responsible for the infection in the different localities.

It is a matter which must be settled as soon as possible. It is very desirable that a careful examination of the various strains should be made and a comparison of their immunological relationships. And it is only after this has been done that a dogmatic statement can be made.

What is equally important is the question as to how far all cases of infectious jaundice are explained as examples of spirochætosis icterohæmorrhagica. Typical cases are easily dis-

* Private communication.

tinguished, particularly if seen at the early stage. The acute onset, the severe prostration, the congestion and hæmorrhage in the eyes, and the associated nephritis, render a mistake unlikely. But in mild cases, particularly if seen late when the conjunctival congestion has disappeared, it may be very difficult to decide. This point is mentioned by the Japanese authors, and as a further illustration of the difficulty, infection of animals has been shown in cases which, though ill during an epidemic, never actually developed jaundice. Cases of febrile jaundice occurred on the eastern front which appeared to be typhoid or paratyphoid infections. These can be ruled out by other methods as was done by Moreschi and Carpi on the Italian front. It is worth mentioning that Weil is not yet convinced that the pathogenesis of his disease is explained by Huebener and Reiter's work. He evidently regards the jaundices of unknown origin as being of several types. And, indeed, it would be wrong to try and make this infective process explain all cases. It can only be established by careful work. The mere fact that one specific infection has been proved to be capable of producing an acute infectious jaundice is an argument in favour of there being other allied disorders. One of these may be that type which is liable to be associated with an epidemic of mumps, another yellow fever, and so on. Whatever may ultimately prove to be the truth our review of infectious jaundice has shown, we hope, that it is a specific disease, an important one, a war disease, and one which we have learned a great deal about in a comparatively short time. One, moreover, which holds out prospect of being placed in that small category of diseases which are thoroughly understood, have a secure pathological basis, and in the near future will be amenable to preventive measures, and treatment.

P. P. LAIDLAW.

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Honours.

R.A.M.C.

The following awards to medical officers are announced.

C.M.G.

Colonel H. L. Eason.

Distinguished Service Order.

Lieut.-Colonel H. Hewetson, Major S. L. Pallant, Lieut.-Colonel (temp. Colonel) C. E. Pollock, Captain (temp. Lieut.-Colonel) G. T. Willan, Capt. M. Coplans.

Military Cross.

Captains H. G. Crawford, E. Evans, C. D. Edwards, G. T. Mullally, G. Scott, J. T. Jones (A.A.M.C.), H. D. Smart. Temp. Captain G. F. Hardy. Temp. Lieutenant W. L. Partridge.

Roll of Honour.

Killed in Action.

2nd Lieut. Noël M. H. Atkinson, East Lancashire Regiment, attached to the Royal Flying Corps.

A Fatal Case of Tetanus.

J. H., æt. 47, was admitted into Addison under Dr. Shaw on November 22nd, 1916, for trismus and general spasmodic convulsions.

He had been admitted into Cornelius under Sir Alfred Fripp, on November 10th, with lacerations of the third, fourth, and fifth fingers of his left hand. The patient was a leather worker, and had received the injuries for which he was admitted whilst working a leather-cutting machine, and the skins he was cutting were those from Persian sheep.

During the evening of November 10th the left fifth finger was amputated through the metacarpo-phalangeal joint, the wounds on the other fingers being merely cleaned up. The patient was discharged on the following morning, and his condition appeared to be quite satisfactory.

He attended the Front Surgery daily to have his hand dressed, and four days after the operation the wound showed signs of suppuration. This, however, did not last long, for it had cleared up three days later, and the wound was apparently quite healthy and the patient seemed to be doing well.

On November 18th the patient noticed that he had difficulty in moving his jaw, and soon he became unable to open his mouth to feed himself. For a day or two this was all he noticed, and he did not mention it to anyone at the time, but later he complained of painful contractions of his neck muscles, accompanied, sometimes, by spasms of the chest muscles, dyspnœa, and profuse sweating. These spasms became more painful and more frequent, so he came to the Surgery again on November 22nd, when he was admitted.

On admission he was noticed to be a thin, but rather well-built, man. He had an anxious expression and complained of the stiffness of his jaws. Soon after admission he had a convulsion, in which his jaw became firmly clenched, his back became arched, and the muscles of his chest, abdomen, and limbs became rigidly contracted. His face showed a well-marked "risus sardonicus." During the convulsion the patient complained of great pain, and he appeared very distressed. He perspired profusely and became intensely cyanosed, and on one occasion he passed fæces into the bed during a convulsion. Soon after admission he had three typical tetanic convulsions one after the other. The patient was coughing up some muco-purulent sputum, and on listening over his chest there was evidence of bronchitis. The scar of the operation looked healthy and had healed well, and the wound was not interfered with in any way. Boracic fomentations were applied to the wounds on the other two fingers as they had not quite healed up.

On admission, 6,000 U.S.A. units of antitetanic serum were given intrathecally after a requisite amount of cerebrospinal fluid had been drawn off, and 4,500 units were given intramuscularly. Later in the evening the patient had one general convulsion and several attacks of clonic convulsions; these latter were most marked in the legs.

On November 23rd and on November 24th 7,500 units of antitetanic serum were given intrathecally, and the patient was given morphia gr $\frac{1}{4}$ every six hours for the first two days after admission. His condition appeared to be improving, as shown by the lessening of the rigidity of his masseters and by the absence of convulsions for 36 hours.

During the early part of the morning of November 25th he had another convulsion and after that he became rapidly worse, and died about 7 a.m. He was never unconscious during an attack, and he frequently showed great

variations in his pulse rate. Sometimes the pulse was down to 52 whilst a few hours later it was up to 130.

At the post-mortem examination the nervous system appeared normal, and it was only in the lungs, where there was some mucopurulent bronchitis with areas of collapse at the bases, that any pathological change was found. Rigor mortis was marked.

An effort was made to cultivate bacillus tetani from the tissues around the wound on the left hand, but it was unsuccessful.

In conclusion, I wish to thank Dr. Shaw for permission to publish this case.

E. S. PHILLIPS,
L.R.C.P., M.R.C.S.

Guy's Hospital Christian Union.

Address by the Rev. W TEMPLE on "The National Mission."

Delivered in the Smoking Room of the College on December 13th. Colonel CHARTERS SYMONDS, C.B., in the chair.

GENTLEMEN,—I am only glad to have this opportunity of addressing you, of putting in my word about this National Mission, which has been occupying a good deal more of my time than I could really spare, since just about the beginning of this year, and in some ways rather before that; and I thought that, as I happen to have been connected with it right through, it might be a good thing to say something about its origin, as well as its aims and methods.

In the first place, it began with a group of laymen; it is not, in its origin, a "parson's show" at all. That is, perhaps, worth mentioning, because there are a certain number of people who have expressed their views in public to the effect that the National Mission is a great fuss which has been got up by the bishops because they thought it was high time they did something when everybody else was doing such a lot. As a matter of fact, the unhappy bishops are always doing quite enough. This did begin with laymen; it began with a group of men who had been associated with one another in a variety of things before, and who got together in the spring of 1915, the first spring of the war, to try to think over what they could do in the various sections of society which they represented—and they represented pretty well all that there are—with the view to getting the nation generally to realise the seriousness of what was going on. It was a little while before the formation of the Coalition Ministry and the upheaval which led to that. You will remember that at that time the more thoughtful observers of things were very anxious with regard to what was said to be continued failure of the nation generally to understand what was really at stake. Some may remember a letter from the Bishop of Pretoria appearing in the *Times*, afterwards published as a pamphlet, which led to a considerable stir. And there was keen anxiety about the supply of munitions, and in general the public mind was very unsettled. These men, as they talked it over, came to the conclusion that the thing which was first of all necessary was to get people to realise more widely the existence and influence of the spiritual forces, and, above all, the nation's need of God. Having arrived at this conclusion, they proceeded to go to the Archbishop of Canterbury, and they found him very like-minded with themselves, but also vividly conscious of all those objections to the National Mission which were raised very freely as soon as the scheme was announced, and which are still very prominent in many people's minds. The Church, like every other agency, is short-handed, both with regard to parsons and lay workers; a lot of the best are with the Army, everybody's mind is engrossed, most people are over-working, and beyond the exhaustion due to pressure of work and the general pre-occupation of people's minds, there is a weight of personal anxiety lying upon nearly everybody. The Archbishop, therefore, had doubted if it were possible for the Church to do anything at all on a large scale until the war was over, when, undoubtedly something would have to be done to try to impress the outstanding lessons of it. However, as soon as he was convinced by these men that there would be real support for a movement which was carefully thought out, he decided to go ahead. But he did not decide immediately upon any particular plan. He summoned twelve men, and laid upon them, as a charge, that they should make it a matter of prayer that the Church should be guided to do the wisest thing at this time. Those twelve men accepted this commission, and agreed that, in addition to frequent private prayer, they would be united for an hour every week, if possible in the same place, at all events in the same thought and desire. The hour was Mondays, from 12 to 1.

At that time, as many as possible of us actually met somewhere, and the rest had undertaken to join in actual intercession at those times. This went on for about three months, and then the twelve of us met together at Beaconsfield, in retreat, for two whole days, that is to say, from mid-day one day to mid-day the next day but

one. And most of that time, again, we spent in prayer, reading, meditation, and so on. But we also had some periods for conference, to see whether our minds were getting anywhere. And at the first of these it appeared that we had no chance of getting anywhere at all, because the opinions which the different people had brought with them were very divergent. This continued through the second day. But on the morning of the third day, just as we were going to break up, all of us agreed upon a suggestion which seemed to combine the best points which we had agreed about, but which had not been in the minds of any of us before we came there. I am sure no one who was there could have had the smallest doubt that we were led to that suggestion by the Holy Spirit. We brought this suggestion to the Archbishop, who agreed with us in thinking it was a real illumination as to the next step to take. People from outside, who had not been in any way thinking over the thing, or praying about it, and who had not shared in the experience which led up to it, regarded it as so vague as to be useless. And one of the features of this whole movement has been that the people inside seem to see where they are going- at least for the next step or two, and that is about as far as in spiritual matters people ever see—while those outside have often failed to see any objective in the movement at all. The Archbishop laid this suggestion before the assembled Bishops of the whole country, and they, in the result, decided that there was to be a movement, entitled "The National Mission of Repentance and Hope," of which the first great public effort was to be in the autumn and winter of this year. They then appointed a council of about 70 people to guide the movement, to give advice about it, and so on. That council has since swollen to a little over 100. Outside critics thought the procedure very odd, and so it was. What the Bishops had done was to say that there was to be a National Mission of Repentance and Hope, and it was to take place in the autumn of 1916, and they appointed several people to decide what it was that was to be so called. Looked at from the outside, that was fairly ludicrous. But in fact this was the first stage in a course along which we were being guided, and it was no small thing to have this emphasis on Repentance and Hope from the outset. The Council met, and we repeated what had happened to us with the smaller group of twelve people. At the first meeting we were in absolute chaos. People all wanted different things, and they were rather savage about the things which other people wanted. That meeting broke up with every promise of sheer confusion. We only arrived at one conclusion, and that was that before we tried to do any more business—having so conspicuously failed this time—we must go away and say our prayers. Before the next meeting of that council we went to Westfield College and spent two days there in prayer: and from that moment there has been no trace of division of feeling on the council. There have been, of course, different opinions; there is no point in collecting together busy people from the length and breadth of England except to gather opinions and either combine or choose between them. But there has been no shadow of a division of spirit of any kind since that time. And that is true of the whole history of the council, until it formally wound up its business and handed back its commission to the Archbishop last Thursday.

Then this rather odd characteristic began to show itself as the work spread about the country. If the movement was to be organised, the time was absurdly short: it could not be done. You cannot get an institution of the size of the Church of England, in which most of the organisation has got its activities mapped out a good way ahead, to concentrate on any object, however comprehensive, in a short time. This movement was launched at the end of January. We were getting pretty near to Lent, when all parochial organisations are occupied: and there were also going to be months of summer holidays, when you cannot do very much. It meant, in effect, that the only time for real preparation was going to be between Easter and the end of July, an absurdly short time. Consequently, the machinery had to be arranged in what was, to all human calculation, a ridiculous manner. There was a Central Council, which was supposed to give advice, But there were a number of local councils in England, one in every diocese, to conduct the movement locally. Of course, the local bodies met more easily than did the central body, and so they got ahead first. And those of us who were acting as secretaries perpetually had this experience; some man who was running the affair in Lincolnshire, or Devonshire, would write up and say "What advice have you people at the centre got to give about this sort of problem?" and we always had the same answer for them, that we had no advice to give, because the Central Council had not got there. And when the Central Council ultimately did get to that point and consider it, we used to send down their findings, and we always got the answer, in one way or another, "That is the conclusion which we reached a little while ago." The first time that happened you said "Good business! This is the sort of thing we might have split on, but we are not going to." But when it went on happening, time after time, it became apparent that there was a unity in this movement, not because there was a central mind moving it, but because one current of thought, or, as I should say, the Holy Spirit was working through it all.

That, then, is the way the thing started, and at present it has only just begun; it is not going to end while any of us are alive. Up to date it has not done much, except inside the Church itself. In some places it has got out a good deal beyond that, but, on the whole, it is true that it has only worked inside. Inside it has done an immense amount. The Church of England at the present moment is enormously more alive, and enormously more united than it was a year ago. For example, I have just heard about a town concerning which I know nothing otherwise at all, and the report which was brought to me may be coloured by the views of the speaker, but the report is that there

are three churches in the town, representing entirely different tones of thought—High, Low, and Broad—and the rule has been that whatever one church started, the other two sniffed at, and it was impossible to get anything under way because of the opposition on the part of the other people in the place, until last Easter, when, in connection with the National Mission, they got together for preparation for it, and ever since then, throughout these intervening months, whenever one o the three churches have started anything, the othe two have backed it up. The result is that the Church there has become an enormously live thing. They have appointed social committees to go into various things in the neighbourhood, to exercise pressure on the local authorities, to look into places of amusement and see that they are decent, and so on. That is entirely new, and hitherto it has been impossible. There was another instance, in a town in the North, where they had been a great deal divided, but from the time that this movement was started, the clergy there o fal parties have been meeting every week for conference, and with enormous advantage, through meeting with people who disagreed with them.

People are, in religion as in other things, being shaken out of the old course of things, and wholly new experiments are being made. Another great sign is that the Church had got into the habit of thinking about itself with a good deal of detachment from the ordinary affairs of the world, and, so long as the parish organisa tions were going strong, they were prepared to leave things rather alone. And there has come, as a horrible revelation, the fact that when, as at present is the case in the camps, you gather together what is virtually the young manhood of the country, you discover that the great bulk of them have not the foggiest idea what Christianity is. I do not mean that they reject it; they do not know what it is. They have got some amazing conceptions as to what constitutes it, which reflect very severely upon the activities of the Church, showing that, whether the opportunity was small or great, it has not been successfully utilised. We have failed to show people what we mean by Christianity on an extensive scale. There was a big investigation made, as part of the preparation for this Mission, and a summary of the results has been made; and it reveals the prevalence of astonishing ideas. I have no doubt that half the trouble that the Church has to meet in regard to its doctrine is due to a sheer misunderstanding of what it is. I have known that from the more educated artisans, with whom I have mixed a good deal. They ask "How can you believe so and so?" and I answer "I do not, and I could not." To that they say, "Then you are a fraud." And I proceed to tell them the views held on those questions by the teachers of the Church, the theologians. Then they get angry, and say "Why were we not told?" Then I ask them when last they listened, and in some cases I find they have not been to church since they were 18 or so. I think the difficulty is, largely, sheer misunderstanding; I do not say all, but more than half. The Church has now been shaken out of most of the complacency which possibly existed before, and in that sense at any rate, the Church, which is at this moment coming out more into the public view and requiring from the nation repentance and hope, is a Church that is already penitent, at least in the sense that it is conscious of failure on many sides, and has won a new outlook on the world and its own task in it.

(To be concluded

Guy's Hospital Maternity Charity.

IN presenting a short report of the work of the Maternity Charity for the twelve months since November, 1915, the statement that we have been able to "carry on" will, I am sure, be received with pleasure. Naturally at this time the Nurses, on completion of their Hospital training, are anxious to take up Military Nursing, but in spite of a large number having done so, we have continuously employed seven pupil midwives, the Resident Midwife, and the Assistant Midwife.

For nearly 30 years this Charity has been the Training School in Midwifery for Guy's Nurses, and this year the average number, twenty-four, have passed the Central Midwives' Board Examination,

There are some new and interesting facts to chronicle for 1916, both as regards the training of the Nurses and the increased value of their work among the Mothers and Babies. According to the new regulations of the Central Midwives' Board the course of training is now four calendar months for a certified Nurse from a recognised Hospital. When the course was for three months our Nurses could always secure the number of deliveries required, and often very many more. Hence the additional month to be spent in residence can be devoted to those very important aspects of midwifery—pre-and ante-natal, which under the old regulations there had not been the opportunity to study.

The Resident Midwife now gives out the Maternity Cards to the prospective mothers in the Out-patient Department, and she is thus enabled to get in touch with the women. Those who obviously require it are visited, and if it appears necessary, are recommended to obtain medical advice. In this way twenty women consulted an Obstetrical Physician and five of them were admitted into Victoria Ward. Between May 5th and November 30th, 1916, 420 pre-natal visits were paid. This we hope will lead, in the near future, to no woman being attended by our pupil midwives who has not previously been seen in her own home.

In June a small Baby Clinic was started each Wednesday from 2 to 4, and has proved very popular. Though

our space is very limited we are pleased to find that to date 400 babies have been brought to us, and of these 17 were sent on to the Hospital with a request for medical advice. The District Class Room is the scene of the weighing and recording the weights of the babies, and during the Summer the garden was invaluable for the mothers' cup of tea, and gave great delight; in fact many stayed all the afternoon, and one was heard to declare "that it fair put her in mind of the country."

We have also been able to take over any ante-natal nursing and special treatment required for mother or child on the Externs' side. Previously this had been undertaken by a Queen's Nurse in residence at the Cherry Garden Street Home, and although the work was done exceedingly well from there, we are naturally pleased to be able to supply our own Nurses to carry it on.

REGARDING OUR PATIENTS.

To the end of November 742 births had been attended on the Nurses' side and 124 on the Externs' side by the Nurses. Of these patients 16 abnormal cases were admitted into Victoria Ward, and 88 were seen by the Obstetric Resident, at the request of the Resident Midwife.

We started the year 1916 with cash at the bankers £109 3s. 3d., and subscriptions to date make the total £143 6s. 6d. We have now in hand £81 8s. 0d. to meet Christmas and current expenses until more subscriptions come in.

We have greatly curtailed our Christmas gifts, but last year and this each Nurse gives a really substantial dinner, including a joint of meat and coal ticket, to the family she thinks most requires it, and £60 has been spent by the Nurses during the twelve months on immediate necessities of food and clothing for Mothers they were actually attending.

There are a large number of our Patients absolutely untouched by the oft quoted munition wages and separation allowances but who do feel the rise in food prices, "which is now twice as much as the average increase in wages." Every day our Nurses see real destitution, squalor, and filth, which result in impaired health, and lives which can at best offer little joy.

As this Report goes to print one of the Nurses is visiting Commercial Road, Lambeth. The mother is lying on an indescribable bed with premature twins—there are five other children of school age. The house is four rooms over a stable; there are two chairs and hardly any crockery; there can only be one fire, and in the cold weather the whole family live and sleep in one room. The smells are dreadful and the sanitary arrangements nil, the window panes broken and stopped up with rags. The father is a vanman and earns 30/- per week, the rent is 6/6, and the bread costs 10/- per week. What could any one of us do with the remaining sum of 13/6 to support a family adequately with decency and cleanliness.

May the day dawn when these things will not be. At present those of us to whom life has given health and opportunity can in no wise cast a stone at those whose circumstances are so remote from our ken, but we can help to alleviate the distress of the moment, and this assistance the Nurses are thankful to receive.

We are grateful for donations of money, clothing old and new, rugs and blankets, boots and shoes; and can assure you that all gifts can be put to very good use indeed.

Again with our thanks,

10, St. Thomas's Street, London, S.E.,
December, 1916.

F. A. SHELDON,
Lady Superintendent.

Apart from our actual work we should like to place on record three occasions on which, through the kindness of friends, the District Nurses have been able to give great pleasure to our ex Borough babies of all ages.

The Landon Christmas Tea in Out-Patients is one. Then, Lady Fripp, Mrs. Seymour Hicks, Miss Betty Hicks, and several of their most kindly friends, have provided three splendid Christmas treats here at No. 10, St. Thomas's Street, and have themselves been present to help in distributing toys, garments, buns and oranges.

Also, last Summer and this, Mr. and Mrs. Charles Haywood invited 80 children to their beautiful home at Reigate, and it would be impossible to say which was most enjoyed, the "long" railway journey, the brakes to and from the station, food *ad lib*, the field with things in it to gather, donkeys to ride, or the real "merry-go-round."

It took the children some time to grasp the fact that all this could be "free," and the pennies pressed upon them by fond mothers at London Bridge Station could be taken home again.

For these red letter days our thanks.

Papers by Guy's Men.

E. Cronin Lowe, M.B., B.S., in collaboration with Capt. Ernest Glynn, F.R.C.P., R.A.M.C.: Observations on the serum reaction of three hundred unselected cases of "enteric" from the Eastern Mediterranean, with the Oxford Standard Agglutinable Cultures.—*Journal of the R.A.M.C.*, December, 1916.

Capt. G. T. Mullally, F.R.C.S., R.A.M.C., in collaboration with Capt. J. W. McNee, M.D., R.A.M.C.: A case of gas gangrene exhibiting unusual proofs of blood infection.—*Ibid.*

A. T. MacConkey, M.B., D.P.H.: Note on the keeping qualities of therapeutic serums.—*B.M.J.*, Jan. 6th, 1917.

Guy's Hospital.

IN accordance with annual custom the House Committee publishes for the information of the Medical, Surgical, and Nursing Staff, the following Tables showing the total number of patients sent during the past year to the various Convalescent Homes connected with the Hospital.

WARDS.	NUMBER OF PATIENTS. 1915	1916
Astley Cooper	50	10
Cornelius	55	40
Lazarus	57	48
Job	83	45
Naaman	49	62
Luke	40	70
Evelyn	159	126
Patience and Samaritan ...	130	75
Charity	50	59
Dorcas	50	33
Lydia	79	50
Martha	50	31
Eye Wards	36	61
Addison	56	48
Mary	55	29
Esther	73	19
Queen Victoria	101	65
Clinical	61	40
Out-Patient Department ...	53	53
	1287	964

The subjoined list gives the distribution of the patients amongst the various Homes:—

Ascot Priory		183
Burns Home		100
Children's Home Hospital (Hadley)		8
Hospital Convalescent Home (Swanley)... ... (Closed from beginning of July)		124
Merchant Taylors' Home (Bognor)		175
Metropolitan Convalescent Institution:—		
Bexhill	38	
Do. (Little Common) ...	62	
Broadstairs	81	
Walton-on-Thames	38	
	—	219
Rustington Convalescent Home		12
Schiff Home of Recovery		51
		872

SANATORIA.

(Beds allocated free of charge to the hospital by the King's Fund):—	
Didworthy (Devon and Cornwall Sanatorium) ...	10
Holt (Kelling Sanatorium)	16
	898

In addition to the above, 66 patients have been sent to various places for convalescent treatment, principally in co-operation with the Charity Organization Society and the Invalid Children's Aid Association 66

964

List of amounts received from Patients in the various Wards, and sums found in Ward Collecting Boxes, etc., for the year ending December 31st, 1916. The amounts received in the previous year are inserted for the purpose of comparison.

	Box Collections. 1916. £ s. d.	Special Donations. 1916. £ s. d.	Totals for 1915. £ s. d.
Front Gate Box ...	7 1 7	—	3 4 9
Porter's Lodge ...	10 14 2	—	2 17 11
Out-Patient Dept.	6 2 3	3 15 0	9 19 11
Surgery	10 8 9	1 0 6	18 19 0
Dental Department	5 2 9	—	7 10 10
Light Department	1 17 2	60 17 0	17 19 11
Massage Dept. ...	90 5 2	1 1 0	54 6 11
Electrical Dept. ...	0 4 11	—	—
WARDS.			
Addison	1 11 9	21 14 0	13 18 11
Astley Cooper ...	4 2 4	39 9 0	29 18 1
Bright	1 1 1	28 6 0	83 7 2
Charity	1 18 1	72 12 0	35 10 7
Clinical	2 10 8	23 7 0	8 4 9
Cornelius	0 17 2	27 12 0	24 19 4
Dorcas	5 11 9	70 8 0	34 17 3
Esther	1 8 3	19 3 0	34 16 2
Evelyn	1 12 5	13 3 0	18 2 11
Eye...	5 11 0	19 6 0	27 11 0
Job	10 7 0	39 .4 6	30 14 6
Lazarus	0 16 5	85 9 2	49 13 9
Luke	2 0 4	29 15 0	20 1 11
Lydia	6 2 0	59 16 6	10 5 2
Martha	5 0 4	95 1 0	65 7 8
Mary	3 3 9	25 7 0	19 13 3
Naaman	4 8 8	32 7 0	47 8 6
Patience	1 7 1	9 16 0	13 17 0
Queen	9 14 1	69 12 6	103 7 8
Officers' Section ...	8 19 4	115 9 0	128 15 4
	£210 0 3	£963 11 2	£915 10 2

TOTALS	1916. £ s. d.	1915. £ s. d.
Box Collections	210 0 3	149 5 4
Special Donations	963 11 2	766 4 10
	£1,173 11 5	£915 10 2

The Royal Sanitary Institute.

On Wednesday, January 31st, at 4.30 p.m., at 90, Buckingham Palace Road, a discussion will take place on "The Physical Welfare of Children after Infancy from the National, Social, and Public Health Standpoints." The discussion will be opened by W. Leslie Mackenzie, M.A., M.D., LL.D., F.R.C.P. Medical men who are interested are invited to attend.

Middlemore Prize, 1917.

The Middlemore Prize consists of a cheque for £50 and an illuminated certificate.

The Council of the British Medical Association is prepared to consider an award of the Prize in the year 1917 to the author of the best essay on the following subject: "Disorders of the Eye and of its functions induced by war injuries not directly affecting the eye."

Essays must reach the Medical Secretary of the British Medical Association, 429, Strand, London, on or before April 30th, 1917.

Letters from Old Guy's Men on Active Service.

Salonica,
December 11th, 1916.

I have been at Malta spending three months convalescing after malaria, so just missed the strafing. I met G. E. Kidman there, who is an M.O. on a ship, lucky beggar. I wished I had stayed, instead of which I will end up six foot under in greasy Macedonia.

I had a rotten voyage back here from Malta, and was sick most of the way, and found it very cold, but where we are now it is quite nice and cheerful. In billets in a two-roomed cottage and a huge log fire, plenty of food and whisky, but no smokes or tobacco. It is curious, we either have a hell of a lot of stuff or none at all. This applies to whisky, rations, tobacco, mails and work. . . . . I am becoming a very rheumaticy old man. Am still with 84th M.G. Company.

GEO. ELKINGTON.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Materia Medica and Therapeutics, By Rakhaldas Ghosh, L.M.S. Calcutta University. (Published by Hilton & Co., Calcutta.) Price 7s. 6d.

This is the sixth edition of a work first published in 1901. It is edited by Lieut.-Col. B. H. Deare, I.M.S.

It is a useful book of reference, but frankly we do not think that it will attain any great popularity in this country. In the preface, Dr. Ghosh admits his indebtedness to Dr. Hale White's book on Materia Medica, which has been followed in the classification of drugs according to their pharmacology and therapeutics. In places, indeed, the book is little more than a transcription of Dr. Hale White's work. Though this adds rather than detracts from the actual value of the book, it makes it difficult to give Dr. Ghosh credit for much that is best in his work.

The subjects of Pharmacy and Dispensing are dealt with at considerable length, and there is a short chapter on Vaccine and Serum Therapy at the end of the book, which, though it does not pretend to give more than a brief outline of the subject, has rather more origina matter in it than the rest of the book. Though the book has only recently been published, there is no mention of any of the newer anti-syphilitic remedies such as Kharsivan. In the sections on Therapeutics, Dr. Hale White has been followed fairly closely with occasional omissions. For example, there is no mention of the use of Adrenalin in the treatment of asthma.

Nerve Injuries and their Treatment. By Purves Stewart, M.A., M.D. Edin., F.R.C.P. Lond., temporary Colonel A.M.S., and Arthur Evans, M.S., M.D. Lond., F.R.C.S. Eng., Captain R.A.M.C. (T.). (London: Henry Frowde and Hodder & Stoughton, 1916.) Pp. 208. Price, 8s. 6d. net.

Needless to say this book deals mainly with war injuries, of which the authors have had a wide experience. The earlier chapters deal with the symptoms and signs of nerve injury, and give a short account of the various lines of treatment and of the prognosis. The greater part of the work is a description of the lesions which follow injuries of particular nerves. The book is extremely well illustrated, mostly by photographic reproductions. In dealing with each nerve, a brief but clear account is given of its anatomical course and relations. We have no hesitation in recommending this as a most excellent book of reference for any medical man working in a base hospital where nerve injuries are met with.

Books received.

A Copy of the last Will and Testament of Thomas Guy, Esq. London: Printed for John Osborn in Lombard Street, MDCCXXV.

We have received an interesting copy of the above book from Mr. W. S. Lakeman, L.D.S., R.C.S. Eng. It was found among the rubbish cleared out of a very old lawyer's office at Uxbridge a short time age, and has been kindly forwarded to the GAZETTE. It contains the bookplate of Peter Theobald, Esq., who was one of the original Governors of the Hospital. His name also appears in Guy's Will as one of his Executors and Trustees.

The book also contains "An Act for Incorporating the Executors of the Last Will and Testament of Thomas Guy, late of the City of London, Esq.; deceased, and others, in Order to the better Management and Disposition of the Charities given by his said Last Will." This Act was passed in the eleventh year of the reign of King George, and according to it "Four hundred poor Persons, or upwards, who . . . . were or might be adjudged or called incurable, and as such, not proper objects to be received into or continued in the present Hospital of St. Thomas, or other Hospitals, ... should apply to the said Executors and Trustees for Relief, and shall be admitted into the said intended Hospital."

At the end of the book are a number of extra pages containing manuscript notes of a number of annuities, which apparently amount to £72,750.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Births.

CRAIG.—On the 27th December, 1916, at 87, Harley Street, W., the wife of Maurice Craig, M.D., F.R.C.P., of a son.

JOHNSON.—On the 28th December, at Forest Edge, Wootton, New Milton, Hants, "Joan," wife of Lieut. A. P. L. Johnson, R.A.M.C., Dental Surgeon, of a son.

WRAGG.—On December 30th, at "Kincraig," York Road, Southend-on-Sea, the wife of Ernest Wragg, M.B., B.S., of a daughter.

Marriages.

BENNETT—WEISS.—On December 20th, 1916, at 54, Rue des Saints Pères, Paris, Thomas Izod Bennett, M.B., B.S., temp. Capt. R.A.M.C., to Ruth Iris, youngest daughter of Monsieur N. Weiss, Secretary for the French Huguenot Society.

CAMPION—SHELLEY.—On 30th December, at St. Mark's Church, Alexandria, by Rev. L. Fry, Rowland Burnell Maule Campion, Capt. R.A.M.C., eldest son of C. A. B. Campion, The Hawthorns, Shortlands, Kent, to Kathleen Sybil, daughter of Edgar Shelley, of London and Melbourne.

FOSTER-SMITH — ANDERSON.—On Wednesday, December 6th, 1916, at H.M. Consulate, and afterwards at St. Mark's Church, Alexandria, Capt. G. F. Foster-Smith, eldest son of George Foster-Smith, Esq., of the Ministry of Education, Cairo, to Edith Caroline, daughter of the late Charles Anderson, Esq., of Newry, County Down, Ireland, and Mrs. Anderson, of Barnes, London.

SHERRIS—JONES.—On the 30th December, at St. George's, Tufnell Park, London, N., by the Rev. G. E. Asker, M.A., Capt. Cyril Sherris, R.A.M.C., youngest son of John F. Sherris, to Dorothy, youngest daughter of the late Charles G. Jones, formerly of Exeter Road, Brondesbury, London.

Death.

ATKINSON.—On the 27th December, 1916, 2nd Lieut. Noël M. H. Atkinson (East Lancashire Regiment), attached to the Royal Flying Corps, son of Dr. and Mrs. J. Reuell Atkinson, aged 25.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

DURING the past few weeks there has been a considerable amount of correspondence in the chief medical journals on the subject of a mobilisation of the medical profession. Many divergent views have been expressed, but the general tendency of opinion has been that it is better for the medical profession to submit to a voluntary mobilisation arranged from inside rather than to wait for outside pressure before anything drastic is done. Medicine is a profession which is in rather a different position from that of most others at the present time. In it no substitution of labour is practicable, and the problem of providing sufficient medical men for the ever-increasing demands of the Services has to be met by economising the limited number of qualified men available, and it is with this end in view that the mobilisation of the profession is suggested. The only other alternative is for the Government to allow doctors with foreign qualifications to practise in this country, either among civilian or military patients. This latter proposal is one which must inspire a certain amount of misgiving. Further, the output of qualified men, unlike that of munitions or other military necessities, cannot be increased. In fact, the shortage is bound to become more acute with each year of the war, in spite of any steps the military authorities may take to release medical students from combatant service.

The essence of the proposed mobilisation is to compel every member of the profession, whether he be under military age or not, to take up work where he is most needed. The argument is that some districts are over-supplied with doctors while others are suffering from a deficiency. If the older members of the profession, who are at present not liable to military service, could be rooted up from their homes and transferred to districts where they are required more urgently, it is argued that the needs of the civilian population could be supplied by a minimum number of men.

There are many obvious arguments against such a scheme. To begin with, it may be said that it is unfair that one particular group of citizens should be compelled to suffer greater inconvenience and perhaps loss of income than any others. In other words, a compulsory mobilisation of medical men is unjust unless the whole country is to be similarly and simultaneously mobilised.

Another line of argument against mobilisation is, perhaps, better founded. It is maintained by many, who are, perhaps, in a position to speak with authority and experience, that the medical men already in the army are not

being used to the greatest advantage. It is a common experience to meet R.A.M.C. officers who complain that they have not enough work to fill up their time, or else that much of their work is not professional and could be equally well done by men who have not had a medical training. This complaint is specially prevalent among medical officers with the Expeditionary Force in France. The difficulty, of course, really lies in the fact that for many R.A.M.C. men periods of almost complete inactivity alternate with periods of extreme overwork. While everything may be quiet at one part of the line great activity may be taking place in some other quarter. The official establishments of R.A.M.C. units are such as to provide at all times enough doctors for the more strenuous periods. Naturally such an establishment must necessitate a considerable number of men being comparatively idle. It is difficult to see how such a state of affairs can be remedied, but perhaps something might be done by instituting a mobile reserve of medical men who could quickly be brought to any point where their services were needed. In this way it might be possible to diminish the present establishment with each division. In these days of more or less permanent trench warfare any big effort either by the enemy or on our own part is known about some time before it begins, and there should be ample time to bring up an extra supply of medical officers.

Mobilisation of the profession is also viewed by some as a step towards a state medical service, and certainly if each district is to be served without competition by a few medical men who are sent there by some central authority, the right of a patient to a free choice of doctor is bound to be to some extent curtailed. The whole organisation would be one which quite conceivably might eventually become a state medical service. Experience of life in such a highly organised body as the R.A.M.C. is hardly likely to make medical men wish to live after the war under a regime of authority such as a state service implies.

MANY of those who are now with us will have taken up commissions in the R.A.M.C. before the next issue of the GAZETTE. For the benefit of those of them who are not conversant with the ways of the army we venture to summarise some hints sent us by a regimental M.O.

1. Salute your commanding officer and second-in-command (if of field rank) the first time you meet them in the morning, and every time you meet them when on duty. In the Mess, however, it is unnecessary to intersperse your conversation with "Sir" too often.

2. You will receive many memoranda and orders from higher authority which may seem to you foolish or impossible to carry out. On no account should you express your views on them. Criticism of higher authority is a breach of military discipline. Do your best, and all will come right in the end.

3. Be tactful in your dealings with company commanders. Avoid reporting them to headquarters or you will probably very soon find them reporting you. Above all never give a man an order when he is not under your command. The correct procedure is to see his company commander and get whatever you want done through him.

4. Do not start by being too kind-hearted at your sick parades, or they will soon be unmanageably large.

5. Do not be afraid of appearing afraid. It is foolish to stand in the open, when there is danger, if your duty does not necessitate it. You will soon learn to distinguish real and apparent danger.

6. Do not burden yourself with masses of useless kit. You can buy practically anything

in the way of clothing or equipment from the Army Ordnance in France. For trench work in the winter nothing is better than a short oil-skin coat and cap in conjunction with rubber overalls from the knee up the thigh. A long coat soon becomes intolerable in mud.

7. Keep on good terms with the quarter-master. He can usually supply you with anything from a piano to a tooth-brush.

The suggestion made in our last issue that the Hospital should make arrangements to have an ambulance of some kind always available has found supporters among those whose duty it is to send patients from the surgery to infirmaries. Only last week a patient who was to go to an infirmary had to be taken into the Hospital owing to the absolute impossibility of obtaining a cab or taxi. The difficulty is one which is likely to increase rather than diminish, and in fairness to house officers some steps should be taken to relieve them of the responsibility of securing adequate transport.

We publish in another column an account of the Carrel treatment of wounds kindly sent us by Mr. F. D. Saner and Mr. C. Dean. Full particulars are given of the methods employed in preparing the irrigating fluid and in the bacteriological control. The results obtained seem very good indeed, and we shall be much interested to hear if the treatment proves equally successful in the hands of other workers. Considerable stress is laid on the fact that the irrigating fluid should be made up exactly as in the formula given, as otherwise the best results cannot be obtained.

Though the Hospital was not called on to deal with any of the victims of the disastrous explosion on the evening of January 19th, the concussion here was considerable. Some windows were broken in the Surgery and in various wards. The shock was such that for a time it was very difficult to tell how far off the explosion was, and for a moment many thought it was a Zeppelin bomb which had fallen close at hand.

Many old Guy's men will hear with regret that Mr. Betts, who was in the service of the Hospital for nearly 50 years, died recently at the advanced age of 90. He worked as assistant in the Museum for many years, and retired in 1903. He was a well-known figure in the Hospital, and was to be seen feeding the pigeons in the park every day. The latter were so tame that they would feed out of his hand.

Nurse, discussing Ward Concert with patient aged 4—

Nurse: And what did you like best, sonny?

Sonny (*beaming*): The Caike!

Pass List.

Examining Board in England by the Royal Colleges of Physicians of London and Surgeons of England.

At the quarterly examination in Practical Pharmacy held on January 11th, the following Candidates were successful: H. D. Apergis, L. Gill, J. C. C. Howe, M. Pearson.

First Professional Examination.

At the Examination held recently the following candidates were approved in the undermentioned subjects:—

Chemistry and Physics: E. T. Lloyd, J. Rosenberg.

Physics: H. T. Chiswell.

Biology: H. J. Lyon, F. L. Rayner, J. Rosenberg, W. H. Turner.

Second Professional Examination.

At the Second Professional Examination the following candidates were successful:—

Anatomy and Physiology: W. M. Brown, M. Cohen, K. M. K. Duff, W. G. Hay, G. Hume, M. F. Ismail, A. E. Sawday, H. N. Shapiro, J. E. Wright.

The Carrel Treatment of Wounds.

BY
F. D. SANER, F.R.C.S., AND C. DEAN, B.M. OXON.

A Visit to the Carrel Ambulance, Compiegne.

THE main principle carried out in this hospital is the primary sterilisation of wounds with subsequent secondary suture.

Sterilisation is carried out by means of a solution containing sodium hypochlorite as the active agent and of a certain strength (0·45 to 0·50 per cent.). This solution was originally prepared by Dakin while working with Carrel, and has been as nearly as possible perfected by means of experiment and clinical observation. Great importance is attached to the necessity of the solution being of this strength, for if below it is insufficiently active, while if above it is irritant to the tissues and skin. The failure of others to obtain the results seen in this hospital is put down by Dr. Carrel to the different and inexact preparations used. The wound is constantly kept moist by means of intermittent irrigation, which, with a minimum of disturbance to the patient, corresponds to constant dressings and keeps a constant supply of antiseptic in the wound. The progress of the wound is controlled by means of bacteriological examination, suture being performed when the wound has been relatively sterile for about a week. The immobilisation of limbs in this, as in any other treatment, is of great importance; the limbs are slung and Sinclair's splints, Chutro's extensions and modifications of Page's splint are all being used. In the case of fractures the splints and dressings are arranged so that the daily dressings may be performed with the least possible movement. The general treatment in no way differs from that carried out in other hospitals.

The solution is passed into the wound by means of fine rubber tubes from 30 to 40 c.ms. in length and perforated at one extremity, which is tied distally. The perforations are multiple and vary in number. The perforated area varies from 5 to 20 c.ms. in length. The tubes are connected by means of a long rubber tube with a reservoir of one litre capacity, glass connections intervening. The number of tubes used and the amount of solution vary directly with the size and depth of the wound, and are a matter of experience and judgement for each wound up to one litre in twenty-four hours. The tubes are changed only if they become blocked. As a general rule for deep wounds, tubes with a small number of perforations are used, the fluid being thus forced into the wound with greater pressure. For large surface wounds tubes with a large number of perforations are found more satisfactory. The wound is irrigated every two hours, This time has been taken, since it has been found suitable for the nursing staff, while clinical experience shows that the wound tends to dry in that time, and experimentally the solution loses its bactericidal value after this length of contact with the tissues. The greatest care must be taken that the solution reaches every recess of a wound. In cases of comminution of bone the ends of the tubes must be placed as far as possible in the spaces between the bony fragments. The wound is dressed daily, care being taken, as mentioned before, to disturb the patient as little as possible. The top dressings and tubes are removed, and the wound cleaned out with swabs. An important point here is that the dressings should be manipulated by instruments only, no swab or dressing being handled. The wound itself and the surrounding skin are thoroughly cleaned. For this purpose Dakin's may be used, or in cases where the wound is going to be filled with chloramine paste, a soap solution (20 per cent. neutral sodium oleate) is used for cleaning purposes,

and the parts dried with ether. Chloramine is a paste also from Dakin's formula. It is not essential and is not used until the wound is practically sterile. It then has the advantage that the tubes may be dispensed with. The skin round the wound is covered with fine gauze soaked in sterilised vaseline—a necessary step to protect the skin as far as possible from the solution. The tubes are replaced in the wound, gauze moist with the solution is packed round them, and the whole covered with gauze and dry pads. Small pieces of strapping hold the tubes in position outside the wound. Great care must be taken while the dressing is being completed that the tubes are not displaced; also at any time during the day change of position must be most carefully made. If for any reason the dressing has to be touched it is better for the surgeon to do a complete dressing. Should the tubes slip, the solution does not enter the wound, but is poured over the skin. Separate instruments are used for each dressing, but the only ones necessary are two pairs of dressing forceps.

The wounds can be classified roughly in two groups—A and B.

A.—Wounds which come under this particular treatment within the first 24—36 hours.

B.—Those admitted after this.

A.—Excision of the wound is at once performed; with superficial wounds and even those involving muscle a wide excision is not considered necessary. Fragments of metal and clothing are removed as found. In the case of fractures it has been the practice here to perform a wide excision, and completely separated fragments of bone are removed. The tubes are placed in every recess of the wound, so that the solution is forced into all parts.

B.—In practically every case an opening has been made at the C.C.S. Suppuration may or may not have ensued. If there is pus under tension or cellulitis, a good incision is at once made. This is done preferably in bed under gas. The main idea, however, if suppuration be present is to do as little operatively as possible. Tubes are inserted in the openings already present and irrigation commenced. The worse the suppuration and condition of the patient the more liable is any surgical procedure to flood him with toxins and organisms.

The further course is controlled by the bacteriological results. When the wound is sterile secondary suture is performed and the wound closed by the best possible means.

In cases of compound fractures belonging to group B irrigation is continued and the general condition and the bacteriology of the wound carefully noted. These will improve, but since it may have been impossible to reach all the spaces of the wound, especially between the bony fragments, with the solution, the bacterial curve will not reach zero. A time must be taken when the whole condition is considered suitable for operative procedure, and then removal of loose fragments of bone and excision of wound edges or whatever is considered necessary may be done. The wound is left entirely open and the sterilisation which has now the chance of becoming complete, is continued.

In either group the wound may close except for a sinus leading down to a sequestrum. This sinus is generally kept filled with chloramine until the time is suitable for the removal of the sequestrum. In these cases the bacterial chart will not show a complete or continued sterilisation. In no case after manipulation or removal of bone is the wound at once closed, since the bacterial curve shows an immediate rise, and sterilisation must be continued until zero is reached.

In cases where there is comminution and loss of bone substance, provided the wound is sterile, it may be closed and the fracture treated as a simple one. Exposed bone with a sterile wound is not a contra-indication to closure. There are

at present no recent cases of joint injury in the hospital. In cases where partial excision of a joint has already been done at the C.C.S. for drainage purposes, the wound is sterilised as far as possible before the excision is completed.

In the suturing of wounds the usual methods are employed. The skin edges are prepared and sutured, the granulation tissue round the edge of the wound only being excised. (The fine granulations are a very marked feature in these wounds.) In deep wounds buried sutures are advised so as to leave no dead space. In extensive loss of skin, undermining, grafting, etc., is done.

In cases where large nerves have been divided, when the wound is sterile and going to be closed, the ends of the nerves may be dissected out and sutured. In cases of marked loss of substance of bone it would seem that the best procedure is to close or let the wound close first. After a varying period a fresh incision is made and the bone bed for a graft prepared or any necessary procedure is performed. The wound is now left open and irrigated. When a negative bacterial curve has been obtained, the operation may be completed and the wound closed. There has been little or no experience at this hospital of the use of this method in intrathoracic or abdominal suppuration. From other hospitals reports come that it has been used for empyemata with striking success. There is no apparent reason against its extension to suppuration in any part of the body. It would seem advisable where the solution is going to be used for pleural or peritoneal suppuration, that it should be at first rendered more dilute.

As far as possible wounds on the posterior aspect of a limb are allowed to close, the main drainage being sought from the anterior or lateral aspect. This renders the dressing and necessary manipulation more simple from every point of view.

Great care is taken before an operation is finished that all bleeding points are carefully ligatured, since hypochlorite dissolves blood-clot. The importance of this was obvious when watching some wounds dressed for the first time after operation where the wound had been left open.

In this hospital all operative procedures are very largely controlled by bacteriological examinations. This is more studied than the temperature charts. The two do not necessarily correspond, and a patient may have at the same time a high bacterial curve and a normal temperature provided there is no tension. The bacterial curve gives an account only of the number of organisms present in the wound. A wound is sutured as soon as possible after it is definitely sterile; this is necessary as the charts show how extremely sensitive the open wound is to bacterial invasion.

In cases where the bacterial curve remains high in spite of treatment there are several factors which should be looked out for. It should be ascertained that the solution is correct and reaching all parts of the wounds. There may be fragments of metal, clothing, or infected bone present. There may be a collection of pus shut off from the wound. This latter may happen with a wound showing a sterile chart and thus the temperature chart, and the clinical appearance, both local and general, should in no way be neglected.

The main principle of this treatment, viz., sterilisation and suture, is not a new one. Dr. Carrel has, however, brought forward a special application of it, and is still working in conjunction with his colleagues at its improvement. The main ideas are now being copied in some English and French hospitals and there is a constant stream of visitors to the hospital to see the actual technique and its results. It must be said at once that it is only by the strictest attention to detail that their good results are

being obtained. Also it must be remembered that the conditions at Hôpital Temporaire 21 (Hotel du Rond Royal) are of the best, and that the men treated there are in their own country and can be kept in the same hands for an unlimited period. The main feature, however, resulting from this line of treatment and one with which anyone visiting the wards must be impressed is an almost complete absence of suppuration. In those cases received sufficiently early it is claimed that suppuration can be entirely prevented, and in those where suppuration has already commenced it can be arrested more quickly than by other methods of treatment. It is not possible for me to give statistics as to the comparative results between this and other treatments, but from an observation of the wounds at present in hospital and a study of the records of past patients, these claims appear to be in every way substantiated.

Major Clyde S. Ford, Medical Corps, U.S. Army, in an able report on Dr. Carrel's work, gives the following instructive figures: In a group of 135 wounds treated during 1915, 121 had been closed within 12 days. The failure to close 14 of these wounds, or 10 per cent. of the entire number, was attributed to (a) general infection, (b) extensive laceration with destruction of tissue, or (c) want of sufficient skin to cover exposed tissue, a condition requiring subsequent skin-grafting.

In another series of 500 cases of closed wounds, only 10 failed in union and had to be opened. These ten failures, however, were due to the fact that they had been closed on clinical signs of asepsis, without bacterial evidence of sterilisation, except in *one* case, in which the bacterial counts had shown the wounds to be sterile.

In another series of cases completed December, 1915, including 155 wounds caused by shells, grenades, bombs, and mines—excluding all bullet wounds—135, or about 87 per cent., were closed. In this number of 135 closed wounds, one group of 121, or about 90 per cent., healed before the twelfth day, and another group of 119, or about 88 per cent., were closed in less than 30 days.

In this series of a total of 155 wounds there were 25 compound fractures, of which 22 were closed, and 18 were entirely healed in less than 30 days.

The general experience at Compiegne shows that the duration of treatment of gunshot-wounds can be abridged by about two-thirds the time ordinarily required, and that the number of amputations can be reduced much more than 50 per cent. In some cases complete healing occurs in one-tenth of the time required by the ordinary open method of expectant treatment.

The action of Dakin's solution as used here on the wounds is most striking clinically and bacteriologically; a clean-looking finely granulating wound, in which the anatomical layers are easily distinguishable, is obtained after some days only of treatment. In all hospitals now it may be fairly claimed that in cases of superficial wounds treated in the first 24—36 hours excision and closure of the wound is a safe and a successful treatment. Also in deep wounds without fractures the same has been done constantly with varying success, the time for surgical intervention being judged by the clinical appearance of the wound. In these wounds, however, especially where there is destruction of an important nerve or nerves, it is an advance to have some control by which a better estimation can be made of the time when suture of the nerve and wound may be performed with every hope of success. So far it has been generally the procedure to obtain healing of the wound, and then at a secondary operation to suture the nerve. In Carrel's method by which rapid sterilisation can be obtained suture of the nerve may be performed at an earlier date.

I wish especially to emphasise the improvement in the treatment of compound fractures and joint injuries. The power to prevent a septic osteomyelitis or to localise it, is equivalent to saving many limbs, preventing much pain, as well as giving better chances for a firm union of bone. It is unnecessary, however, to dwell on the advantages to the patient himself, and to the community by saving money and man-power, of a treatment which minimises the suppuration in war wounds. They are obvious to anyone who has treated wounds during the present war. The question therefore arises as to how to apply this treatment to a large number of cases where rapid transport and evacuation is necessary, from the Clearing Station to the Base and from the Base to England.

To commence this treatment at the Clearing Station and to neglect it until the Base is reached would be dangerous, as Carrel's tubes and dressings do not drain a wound without the irrigation. It would be necessary, therefore, for men who had knowledge of the treatment to continue it. (This is now being done.) The several movements by stretcher and ambulance would involve risk of the tubes being displaced from the wounds, a detail that would require the most careful attention. It would be necessary to continue the treatment on the same lines at the home hospital.

Until a more extensive trial of these methods shows a way of modifying and perhaps simplyfying them it is necessary to follow closely the technique of the originator.

F. D. S.

No. 9 Red Cross, B.E.F.

Bacteriological Control.

The procedure at the Carrel Institute is as follows:—Every two days one or more films are taken from the wound. stained preferably with thionin blue, and examined under the $\frac{1}{12}$. In the case of a large wound several films are made from separate places. Ten fields are chosen from different parts of the film and the average number of organisms per field estimated. The following approximate figures are taken and plotted on a chart, a specimen copy of which is appended.

Infinity (too many to be counted).

50—100
30—50
20—30
15—20
10—15
8—10 } per field.

1

1 to 2, 3, 4, 5, 6, etc., fields.

If a patient has several wounds, a separate chart may be used for each or the same chart may be used and different coloured pencils employed.

When the number of organisms falls to 1 per 5 or 6 fields, or, in the case of a very small and quite superficial wound, to 2 per field, the wound is considered to be "surgically sterile," and suture may be performed. There are certain reservations, however, namely, that this grade of "sterility" must be found to persist for five or six days, and that the only organisms to be seen are single cocci and diplococci. If a chain of streptococci, or a group of staphylococci or a bacillus is seen, the wound cannot be closed without a great risk of its breaking down.

If, however, the above stage of "sterility" has been reached, closure of the wound may be safely performed, and it is claimed that nerve suture may be done at the same time. As sterilisation proceeds, it is noticed that percentage of mononuclear and endothelial cells, which were absent at first, rises.

Apart from indicating when the wound may be closed, the bacterial curve is of great value in showing whether operative interference is necessary. If the general direction of the curve is on the down grade, no notice need be taken of isolated rises; if, however, it does not

come below a certain point, the cause responsible for the unsatisfactory progress must be sought. The commonest causes are—

1. The Dakin's solution may be of the wrong strength.

2. The quantity of the solution used may be too small.

3. The irrigation tubes may be insufficient in number or may be badly placed.

4. There may be some condition connected with the wound itself which is keeping up the infection; *i.e.*, a foreign body (usually a piece of clothing, necrosed bone, or a loculus which cannot be reached by the irrigating tubes.

It is always found that after any operative procedure the bacterial curve rises and then settles down.

The bacteriological work is simple and does not involve the use of cultures. It is quite essential to do it, however, since owing to the clean appearance presented by most wounds after the treatment has been applied for some days, clinical observation is of little value in estimating the amount of infection present.

Some hospitals are carrying out the treatment without bacteriological control, but at the Carrel Institute the latter is an integral part of the technique, and the bacterial curve is looked on as the only satisfactory indication of the state of the wound, and is studied even more than the temperature chart. C. D.

Preparation of Dakin's Solution.

Dr. Daufresne of the Carrel Institute has elaborated a special technique in order to obtain a solution free from caustic soda and having a percentage of hypochlorite of between 0·45 and 0·5. Great stress is laid on these two requirements being fulfilled, because free NaOH is an irritant and, if the strength of the solution is not between the above limits, it will either be too weak for the purpose of sterilisation or it will be an irritant to healthy tissue.

For the preparation the necessary ingredients are :—

1. Sodium bicarbonate.
2. *Anhydrous* sodium carbonate.
3. Bleaching powder.

If the anhydrous sodium carbonate cannot be obtained it is possible to use the crystallised salt (but 2·85 times as much must be used). It is absolutely essential to standardise the bleaching powder since one must know its content in active chlorine. To do this 20 grammes are taken and dissolved in a litre of cold water. This is allowed to stand for about six hours and is then filtered. 10 c.c. of this is placed in a beaker, 20 c.c. of 10 per cent. K.I. and 2 c.c. of strong acetic added, and into this mixture 1/10 N sodium hyposulphite is run from a burette until discolouration occurs The number of c.c. used multiplied by 1·775 gives the percentage of active chlorine in the sample of bleaching powder. By then referring to the following table the necessary quantities of all the ingredients for making 10 litres of Dakin's solution can be seen.

Percentage of Active Chlorine in the Bleaching Powder.	Amounts of the Ingredients necessary to make 10 litres of Dakin's Solution (0·45—0·5 per cent.).		
	Bleaching Powder.	Sodium Carbonate.	Sodium Bicarbonate.
20	230	115	96
21	220	110	92
22	210	115	88
23	200	100	84
24	192	96	80
25	184	92	76
26	177	89	72
27	170	85	70
28	164	82	68
29	159	80	66
30	154	77	64
31	148	74	62
32	144	72	60
33	140	70	59
34	135	68	57
35	132	66	55
36	128	64	53
37	124	62	52

After having weighed these out separately, put the bleaching powder into a 12 litre bottle with 5 litres of ordinary cold water. Leave for 6—12 hours with frequent shakings. Similarly put the two other ingredients into a second 12 litre bottle with 5 litres of water.

After 6—12 hours mix the two and shake. Let the precipitate settle and after about an hour syphon off the clear supernatent liquid into a filter. The filtered product is Dakin's solution. The strength can be tested by titration against sodium hyposulphite. Take 10 c.c. Dakin's solution, 20 c.c. of 10 per cent. K.I. and 2 c.c. acetic acid. Run in 1/10 N hyposulphite until discolouration. The number of c.c. used multiplied by 0·03725 is the percentage of hypochlorite in the Dakin's.

The presence of free alkali is tested for with phenolphthalein powder. There should be absolutely no pink tinge. Eau de Javel and liquor Labarraque both give a very strong red colouration with this test. Any hypochlorite containing free alkali is quite unsuitable for surgical use as an antiseptic.

Fuller details of the technique and mode of action of the hypochlorites are given in a paper by Dr. Daufresne, published in *La Presse Medicale*, October, 1916, from which the above facts and figures are quoted.

Roll of Honour.

Killed.

2nd Lieutenant C. H. Stainer, L.D.S., R.A.M.C., (Loyal North Lancashire Regiment).

Wounded.

Temp. Captain T. P. Cole, R.A.M.C.

Guy's Hospital Christian Union.

Address by the Rev. W. TEMPLE on "The National Mission."

Delivered in the Smoking Room of the College on December 13th, Colonel CHARTERS SYMONDS, C.B., in the chair.

(Continued from page 16.)

What is the Church to say to the country? One of the things which has quite steadily grown in the minds of the people who are working this movement is, that the phrase "National Mission" must be taken to mean, as certainly, by the Archbishop, at all events, it was always intended it should mean, not so much a mission on a national scale, as an effort directed to the national life itself: not at the individual lives of people, but at the national life itself, at the ordering of our national life, those things which exist because, as citizens, we produce or tolerate them. I will come back to that in a moment.

Let us just notice this: If the Church were going to make an immense effort just at this moment, and say to people, "You ought to be cultivating your spiritual life in an exceptional degree at the present time, because your eternal destiny is at stake," most decent citizens would reply, "Alright, another time; I am too busy just now making shells." And I think they would be perfectly right. But that is exactly not the appeal which the Church has set out to make. On the contrary, the particular appeal with which the Church finds itself entrusted at the present time is, that it comes to the people and says, "You are convinced, as you have never been, that it is right to belong to this England of ours, and that it has the right to dispose of you, to call upon you to risk your life, if need be. If you knew of this before, it was not with the vividness which is present in your thoughts now. And you see the actual process going on: people being taken and claimed by the nation in an absolute degree. It is that sense of obligation to the nation that we call upon you to dedicate. There is only one way of serving England truly, and that is by helping it to be, in all its life, Christian, not merely to consist of Christian people, but to order its whole life in a Christian way." And so comes the call to corporate repentance.

And the first thing to notice is that we have been repenting hard for two and a half years, but, as is usually the case in England, we have done it first, and have recognised it afterwards. We nearly always do that: we seem to find the right thing by instinct, and

then we discover the principle of it afterwards. Our theory nearly always comes after our practice. That was so, if you think of it, in the way we became an Imperial people. We built up an Empire, and considered that the Colonies would drop off like ripe fruit. That statement is not due, as so many people think, to Gladstone, but to that great Imperialist "Dizzy." Anyhow, we turned round and said "Hullo! we are an Imperial people!" And then you got the theory of Imperialism. The Germans set down what ought to be, and proceeded to try to make it so. We became so, and then said why. We had the same process in connection with being an industrial instead of an agricultural people.

Now, the essence of repentance is a change in the point of view. And most people's point of view, most people's way of valuing life, is totally different from what it was two and a half years ago. I do not mean everybody has changed what they would profess in words, but their principles of conduct have changed. People do absolutely know now, for the moment at least, that the one thing worth doing in this world is rendering service, not enjoying themselves. And people, as they reach the military age, do simply —and they did before compulsion came in—take up the activity in which they can be of most service. Nobody now is asking "How can I secure the best time for myself?" but "How can I be of most use?" Before the War, any decent person confronted with the sharp alternative, "Will you, at some cost to yourself, do a great act of service, or will you have a high old time?" would have chosen the act of service, no doubt. But it remains true that most of us did think most about enjoying ourselves, and a good deal less of being of use. That is a turn-round: we have repented.

But that change in outlook is, at the present moment, precarious, partly because it is unconscious, and partly because it is connected with a transitory state of affairs, due to the exigencies of the War. When Peace comes, what is going to happen? Are we going to fall back, whether by a sudden moral catastrophe or by gradual drift into the old bad way of looking at things? Or are we going to maintain permanently the outlook which we won for ourselves during the war, and the position which the war has won for us? That is the root question.

And then we come to another point. There are a lot of people who say—and Mr. Horatio Bottomley has, perhaps, succeeded in saying it loudest—that it is inappropriate to call upon people to repent when they are doing their best, and when that best, moreover, is singularly good, when the people are ready for any amount of endurance and sacrifice for a just cause. But that objection all comes of people supposing that repentance is a miserable kind of thing, of which a normal exhibition would be the cringing of some evil doer before a judge, in the hope of getting off from the results of his ill deeds: or else that you only repent when things are so bad that you cannot remedy them otherwise. Bottomley plainly holds that view, because he said if there were an imminent chance of a German invasion it would be reasonable to repent.

Now, in the first place, repentance is not a miserable thing: it is, essentially, a happy thing: it is a change from what was bad to what is good, and you cannot have anything happier than that. And if it causes joy among the angels of God, I do not see why it should make us miserable here. It may begin with a great deal of sorrow for what is wrong, but, on the whole, it is joyful; it is a getting of things right. Again, the motive in Christianity is always hope, and not fear. The Gospel does not say things are so intolerably bad we must repent and get them better. It says, things might be so splendidly good that we must bring those splendours true. "The kingdom of God is at hand: repent." So repentance and hope are practically the same thing.

One other point in that connection. The time when people are capable of repentance is not the time when they are absolutely sunk in some evil course, it is the time when they have some vision of what they might be, and have some cause they want to serve with all their powers. It is then they are capable of hating, and perhaps destroying, the things which hinder the realisation of that vision and hamper their service of that cause. Repentance, in actual fact, does not go most closely with sin: it goes most closely with aspiration; and England, at this moment, is full of aspiration. It does realise, and it has a chance of realising much more fully than it does, how splendid a thing it is capable of being, how truly magnificent our national life may be. And most undoubtedly there are some things which are spoiling that national life, and it is of those things we have to repent. What are those things?

We are called to corporate repentance. Let us ask what that means, because it will help us to fix what are the things we must repent of. I suppose those of us who have made any habit—as I hope we all do—of what is called self-examination, a periodical taking stock, to see how we are going, tend to stop when we have considered actions the doing or the not doing of which lies altogether within our own power. And with regard to all the great public evils we are disposed to say, "This is very terrible, but I cannot help it." If we had said that when the Germans crossed the Belgian frontier, if we had said, "This is very deplorable, but I cannot help it," it would have been true; but if that had been the truth to which we had attended, there would have been no resistance against the German aggression on our part. We know that the amount which any one of us by himself can contribute to the victory in this war is so small as to be, to all intents and pur-

poses, negligible; but we know that the great result will only be reached if everyone is ready to do that tiny bit which, by itself, looks negligible. If one solitary soldier in the army decides "The amount I can do does not count, so I am off," supposing that he managed to get off, it is possible he would not be missed at all. If 500 said the same, it would make a little difference. If 5,000 said the same thing, it would begin to count heavily; and if 5 million said it, you would get no army at all. We only do a great thing when we all do collectively an amount which, by itself, looks absurd. *I* cannot beat the Germans, but *we* can. *I* cannot cure the great public evils of the nation, but *we* can. And if people will realise that though the amount which each one can do is small, the responsibility for doing it is infinitely great—the sort of feeling we have now got about the war—we shall get things done.

Let us ask what some of these evils are. If you were to ask most people who were prepared to answer at all, what they thought was the chief national sin, they would say Drink. At any rate, it is commonly said that that is our great national sin. I do not think it is the greatest, but I do think it is a national sin. I should not call it that simply because a certain number of people drink too much: it is a national sin because the rest of us do not care: we have been content that there should be a great mass of our citizens with no opportunity for social enjoyment except where strong drink is supreme. We could have done much if we all cared, and it would have been altered long ago. It is the easiest thing in the world, whether by private enterprise or through municipal agencies, or in any other way, to put up decent places of public recreation. Or take the evil which the Report of a recent Royal Commission has brought more prominently before public notice than it has been before, the evil results of lust. Again, this is a national sin not because the majority of Englishmen live immoral lives, but because the rest of us do not care. A little while ago, an effort was made, which has been in very great measure successful, to cleanse certain places which were known to be centres of vice, and the Bishop of London headed a great effort to get it put right. Some of us whose churches are near the places concerned asked members of our congregation to send letters of sympathy with this effort which we could forward to the County Council, so that the Council might know that there was a real public opinion behind it. A considerable number of letters were sent, which, I understand, weighed to some extent with the members of the County Council. We also got letters from people who said that they objected to being invited to concern themselves with any such thing. They said, "It is no concern of ours." To that only one answer is possible, "Perhaps not, but in that case you are not a Christian at all; you have not even begun to understand Christianity if you can imagine that the setting of stumbling blocks in the way of people does not matter, for if you do not remove a stumbling block when you can, it is as bad as if you put it there."

That leads us to what is the fundamental sin of England, possibly of civilisation. I am not concerned with whether we are better than anyone else, but whether we are as good as we ought to be and as good as we could make ourselves. We have not got—except for the purposes of the war—the feeling that we are members of one body, and that if one suffer, all suffer with it, and if one rejoice, all rejoice with it. We have not got, except for the purposes of the war, the sense that there is a welfare of England which has got to be put before all private interests. We look to the period before the war, and ask what were its chief features. The most obvious fact is that we were drifting into civil war in Ireland, without, apparently, any fund whatever of general intelligence and good-will which could produce a suggestion with any hope of averting that disaster. I do not know whether I quote it accurately, but I borrow the phrase substantially from H. G. Wells' recent book "Mr. Britling Sees It Through," an excellent book, which I hope you all will read. It is a very wonderful analysis of the phases of English feeling since about Easter, 1914, down to last Easter. We were also drifting, with equal helplessness, towards an equally great catastrophe, the general strike that was to be called by the amalgamated unions of railway men, transport workers and colliers in November, 1914. I need hardly say that the Capitalist Press, from which most of us get our knowledge of public affairs, carefully concealed the fact that there was such a danger. But those who knew about these matters knew it had been thought out by the industrial workers, and they were all going towards this industrial Armageddon, and there was no sign of dealing with it; certainly the Government was taking no notice. And if we ask whether there has been a moment during the war when the country has been frightened with regard to its own part in it, have not we to say Yes, when there was a dispute between Labour and Capital in the Welsh coalfield. This has broken out again, and the nation is held in suspense because nobody knows how thoroughly the Government has interfered. And this particular instance was very strong, because both sides admitted they were making more than they were before the war, and yet they were both prepared to hold up the whole country at the moment of its deepest necessity in consequence of a quarrel about whether some shillings were to be transferred from profits into wages. As far as I could see, one side in that dispute was as bad as the other, and there was no defence for either of them. No doubt it was the worst instance of that kind of thing, and it happened in that part of the country which is always the storm centre of our labour questions, the South-Welsh coalfield.

But it was only the extreme type of the sort of thing which has been possible all through. And that great conflict between Capital and Labour is, after all, only the most conspicuous in its results, the most disastrous instance, of a tendency to division and faction all through the country. We have been breaking up into sections, which have been keeping their end up against the others. And our endless snobbishness, in all its grades, is another instance of the same evil. And where does it come from? It comes solely from practical materialism. I am not now talking about philosophic materialism: I do not want to begin about that again; you had it last time. It is possible for people who hold the materialistic philosophy to be exceedingly high-minded in their ethical conduct and their ethical ideas. But practical materialism always has this result, because at any given moment there is only a certain amount of material goods. For example, the produce of any particular industry at a given moment, or over any given stretch of years, is of only a certain amount: and if people are thinking first and foremost about getting a larger amount of material goods, if, in New Testament language, their affections are set on the things of this world, if their treasure is laid up here, and so on, there are bound to be divisions, because the success of one means the failure of others. As there is only a certain amount, the more one gets, the less there will be for the others. Achievement for one means disappointment for the rest, and the keener people are about these things, the keener will be their antagonism. St. Paul argues with absolute cogency, when he says that the works of the flesh are manifest; and side by side with the obvious carnal indulgences he puts divisions, strifes, and factions.

There is another set of things of which the precise opposite is the truth. Of the things which belong to the spiritual and intellectual life of man it is true that the more one has, the more others have on that account. If one man is very brave, it does not exhaust the stock of courage and make others cowardly; it makes every one else braver. It is true of love, joy, peace, loyalty, beauty, knowledge, courage, wisdom, temperance, justice: of all these things, the more there is in one, the more there will be in the rest. And so soon as people are putting first spiritual things, so soon are they brought into fellowship with each other. At the present moment we are living in a fellowship for the sake of which we are prepared to surrender ourselves and our property, and, owing to the habit of mind with which we grow up, people are more ready to surrender their lives than they are to surrender their property. But that only lasts while we have this purpose for the moment; and those evils, which have nearly wrecked us once, will come back with devastating effect after the war if we remain in that same state of mind.

What is the Church to do? Not to pretend because it has Christian Doctrine that it also knows economic science. It is not its business to step in and adjudicate. You remember our Lord's words to one who wanted a man to divide up his inheritance with his brother. It is true He said, "Who made me a judge and divider over you?" He said also, "Beware and take heed of covetousness." He said, I am not going to settle this dispute, but I will tell you why there is a dispute, and how to get rid of that. If there had been no covetousness and a man had not wanted more than belonged to him; if everybody wanted to be just, and to err, if at all, on the side of generosity, there could not have been a dispute. The Church's function in this regard finds a perfect parable in a thing which actually happened not very long ago—I think it was in the '80's. In the Durham coal strike things had got to a very bad pitch, when everybody was startled by the intervention of the Bishop of Durham, Bishop Westcott. He was a scholar and an absolute recluse. But he invited the masters and the men's representatives to come to his house, and they came. That is the first point. Both sides could trust him perfectly; each knew he would have no prejudices hostile to themselves which he would want to support; and so they were ready to come. It is not true at present that people are able to turn to the general body of Christian opinion as such and assume that it will rise superior to the ordinary class divisions so as to be absolutely trustworthy to both sides in a dispute. They came, then, to the Bishop's house. They were not on speaking terms, so he put them in different rooms. He went to the masters and he said, "I know nothing about this dispute, and I have only one thing to say to you; you have got to look at it from the men's side." Then he went to the men, and he said, "I know nothing about this dispute, and I have only one thing to say to you; you have got to see it from the masters' side." Then he went and prayed in his chapel. After a specified time he came back; the masters had formulated a proposal, which he took to the men, who did not like it. The men had formulated proposals, which he took to the masters, who did not like it. He repeated his charge, and went again and prayed in his chapel. After a long day, during which this procedure was gone through about five times, the masters and the men put into his hands identical proposals. Then he called them into the same room, and told them what had happened; and the settlement arrived at in that way lasted not only unaltered, but unquestioned, until its basis was removed by legislation. It lasted, I suppose, because under the conditions which were fixed by legislation it was just; and they had found justice because, under the influence of the Bishop's prayers, they each sought it in charity. As long as each side wants to get all it can, or to give up as little as it can, a settlement represents the point at which one side is bound to give in. You will only get justice when each party wants to see and to meet everything which may be reasonable on the

other side. It is all so elementary: "Seek ye first the Kingdom of God," and everything else will come right of itself; of course it will. It does not mean that if one individual puts God first he will be saved from disaster. Christ was sent to the Cross. But if you have a society which cares for justice more than it cares for gain, which would sooner secure justice in its dealings than have enough to eat or clothes to put on its back, then the food and the clothing will come of themselves; material questions will be adjusted easily. There will be problems to think out, but there will be no deadlocks. We have never believed that a bit, and it is a thing we have got to come back to. That is the main piece of repentance that we have got to try to do: to keep permanently in the frame of mind in which we are now when we want not to get what we can for ourselves, but to give of ourselves the best that we can give. There may have to be some people who are ready to be pioneers, and, like most pioneers, they will be liable to be sacrificed. But as that spirit spreads, you will get the adjustment of all material problems coming out of it automatically.

And what are we to do about it? There is one particular thing I would like to suggest to you that we can all do, because the details about what people can do about such a thing must vary greatly. That one thing is, say our prayers, and say them in the right way. I am not going, at the end of a long address, to begin talking about the value of prayer altogether, but I would like to say something about the kind of way in which Christian people ought to pray; and no one, I suppose, disputes that if you are a Christian you should pray.

In the first place, though this is not my main point, but it has a bearing upon it, most people have times when they get into great difficulties about their whole activity in prayer, because all the time, they are thinking about themselves and what they want—probably good enough things—but they think about the things they want and not about God. One uses His name at beginning and end, and yet hardly thinks about Him. Then our prayer is merely the utterance of desires to no one in particular; you are just emptying wishes into space, and you might just as well empty jugs out of the window. Praying is speaking to God, and to that end one has to be sure all the time Who it is to Whom one is praying, recalling for that purpose what you know about Him, or remembering the verses of some hymns, or looking at some picture. In whatever way you like be sure that you keep your mind fixed upon God while you pray to Him.

That is connected with the next point, the particular one which is relevant to what I have been speaking about. Most of us, in our prayers, get into the habit, both in the Church's worship and in the private prayers we make up for ourselves, of praying like the two sons of Zebedee, who said, "We will that thou shouldest do for us whatsoever we shall ask of Thee." And you will remember His answer, "Can ye drink of the cup that I drink of?" It is the only possible answer. When we ask, Will you do me this favour; He says, Can you share my sacrifice? There is something I am going to suffer. Will you share it? The essence of prayer is not to attempt to change the mind of God (even if that were possible it would be both futile and blasphemous), but to bring ourselves into such unity with God and His will, that His power may work out through us for the performance of His purpose. Our Lord did not only tell us how not to pray, He gave us a pattern of prayer. "After this manner pray ye." What is the manner? He says, As you come into the presense of God, you ought to forget all about yourself, your hopes, your ambitions, and even your sins, and be filled with the thought of God. And your first desire should be that everyone should appreciate God, know how wonderful He is and reverence Him accordingly. "Hallowed be Thy name." "In earth, as it is in heaven." When I was Headmaster at Repton, I sometimes asked my boys where they began in the Lord's prayer really to mean anything? What was the first petition they cared about when they said it? I always got the same answer, when I got one at all, "Forgive us our trespasses." You might consider whether that is where you also join in. Boys are not very articulate about these things, but their reason was that this is the first thing they want and can only get from God. If they were poor and hungry, they would begin at "daily bread." But that is not the way the Lord's Prayer begins at all. It begins with God, and the honour which is due to *Him*, the obedience which is due to *Him*, the service which is due to *Him*. "Thy kingdom come, Thy will be done." It has been compared to a letter which might be sent home by some public servant working on the Frontier of Empire in difficulties. Let us work that out. We can imagine someone stationed with a handful of troops in the mountains north of India, with the wild tribes round about in an unfriendly mood. He writes to the King or his representative at home, and says: The one thing I am out here for is to uphold your honour—"Hallowed be Thy name": to extend your authority—"Thy Kingdom come": to carry out your wishes—"Thy will be done": and because that is the purpose of my life, I ask for myself—not comfort, nor happiness, nor success—but enough to live upon, to be supported while I do my work: "daily bread" (the most meagre of all requisites with regard to our wordly goods). And I cannot do the work unless I have your favour to support me; but I have forfeited that by slackness and negligence, and possibly by disloyalty: there is much to be overlooked—"Forgive us our trespasses." I try to treat these other fellows in that way—"As we forgive them that trespass against us." And there is plenty here to develop grit and test loyalty, do not make things harder

than they need be—"Lead us not into temptation." (We do not ask to be delivered from temptation: it is by resisting temptation that we get moral strength, as it is by resistance that you strengthen your muscles; but there are plenty of temptations about the path of duty, and we do not want moral adventures for their own sake.) Just now, he says, I am surrounded, and it is hard to keep the flag flying—"Deliver us from evil," the evil that has got us in its hold and is spoiling our service. Why do we ask to have our sins forgiven and to be led into no temptation and to be delivered from evil? Is it because then we shall be good and happy? No, but because it is God's Kingdom and power and glory we are thinking about all the time. One cannot pray like that unless one's whole mind is set like that. It is only the perfect Christian, it is only Christ, who can utter the Lord's Prayer as a real expression of His whole soul's desire. But there is the standard, and one can grow towards it. One can take the Prayer on successive days through a week, pausing over a portion each time. Thus, on Sunday you would pause when you had said "Hallowed be Thy name" and try and care whether God is reverenced or not. Then on Monday at "Thy Kingdom come." Try to think what the world would be like if in all that men did, private, industrial, commercial, political, they obeyed God's law. So on Tuesday with "Thy will be done." In that way one can build up the meaning of that Prayer. You will find it means everything you want to say in prayer at all, by the time you have thought it right through. And our lives would follow suit. Our lives lag behind our prayers, but if our prayers are sincere our lives will follow them. You will find three-fourths of the difficulties about prayer vanish when you look at it in that way. If we had prayed like that, all of us from the beginning of the Church's history, everything we have been talking about to-night would have come of itself, automatically. The whole of people's desires and their conduct would have been moulded, and they would have for all their lives that absolute allegiance which we feel just now for the claims of our country, but which we shall not feel for our country when the war is over.

And that is the chief point I would leave with you to-night, as one of the things which all of us can begin to do straight away, as our contribution to this effort of the Church. We shall not mind it taking a great deal of time to produce its results. But gradually you will see the whole of public life improved. This is the point which needs emphasis so much just now: that our religion has got to claim the obedience of our public as well as of our private life, our actions as citizens, and not only as private persons. Then the same spirit will permeate the public life of England also, and make our country worthy, in the fullest sense, of the sacrifice which is being made for it, and worthy also of its place in the province of the Kingdom of God.

Obituary.

Lieut. C. H. Stainer, L.D.S. England.

We regret to hear that Lieutenant C. H. Stainer, of the Loyal North Lancashire Regiment, was killed in action on November 15th, 1916, while attacking a German trench. He qualified as L.D.S. Eng. in 1913, and was in practice in South Africa on the outbreak of war. He was very popular while a student at Guy's, and his death has occasioned sincere regret among his brother officers and friends.

Lieut. N. M. H. Atkinson.

Lieutenant N. M. H. Atkinson, younger son of Dr. T. R. Atkinson, was for a time a student at Guy's Hospital. On the outbreak of war he enlisted and subsequently obtained a commission and was attached to the Royal Flying Corps. He was killed in action in December, 1916. We sympathise with his father, an old Guy's man, who has now lost both his sons in the war.

Honours.

Mentioned in Despatches.

In a despatch from Field-Marshall Sir Douglas Haig, Commander-in-Chief of the British Armies in France, dated January 6th, 1917, the names of the following Medical Officers are given whose distinguished and gallant service and devotion to duty he considers deserving of special mention:—

Lieut-Col. (temp. Colonel) E. B. Dowsett, R.A.M.C.
Lieut-Col. (temp. Colonel) C. E. Pollock, R.A.M.C.
Lieut-Col. H. Hewetson.
Major (temp. Lieut-Col.) A. C. Osburn, D.S.O.
Major (temp. Lieut-Col.) H. Stewart, M.C., M.B.
Major (temp. Lieut-Col.) P. Turner, M.S.
Capt. H. M. Clarke, M.D.
Capt. D. W. John (S.R.)
Capt. J. Stephenson.
Temp. Capt. C. Aldis, M.D.
Temp. Capt. M. Coplans, M.D.
Temp. Capt. G. F. Hardy, M.D.
Temp. Capt. H. Walker.
Lieut. M. J. T. Wallis.
Lieut. E. M. Litchfield.

Three Cases of Intussusception.

Ernest W., æt. 6, was admitted into Naaman Ward, under the care of Mr. L. A. Dunn, on November 30th, 1916, suffering from acute abdominal pain.

On Sunday, November 26th, 1916, it was first noticed that the child was unwell. He complained suddenly of sharp pains in the region of the umbilicus. At midnight the same night he began to vomit dark matter, and his bowels were opened about the same time. Frequent vomiting ensued, but no motion or flatus was passed after Sunday evening, nor was there any blood or mucus passed.

C.O.A.—Pulse 112, temperature 98·8°, respirations 26. The child was obviously ill, with sunken eyes and a troubled look. Tongue was furred. He complained strongly of pain in the abdomen generally, but points to the umbilicus as the seat of most intense pain. The abdominal wall was very rigid, perhaps a little more so on the right side than on the left. Deep palpation was extremely difficult owing to the rigidity. A rectal examination proved negative; the rectum was found to be somewhat balloon-shaped. A diagnosis of acute gangrenous appendicitis was made, with spreading peritonitis. It was decided to operate at once.

Mr. Dunn operated; the administration of warm ether was given by Mr. Shipway. The usual grid-iron incision for appendicectomy was made. On opening the peritoneal cavity the operator found that it was a case of intussusception of ileum into ileum, probably a "retrograde" one. The apex of the intussusception seemed to be passing in an upward direction, though this was not definitely confirmed, as, owing to the collapsed condition of the patient, a search for the cæcum was not warranted. The intussusception was disengaged quite easily; there was no œdema; but some dark, evil-smelling fluid had collected between the entering and returning layer of the peritoneum. There was no matting; when disentangled the invaginated part was of a dull black, leaden colour, thin, flaccid and foul-smelling. Mr. Dunn decided to resect the involved portion. About sixteen inches of gut was resected, and a lateral anastomosis was then performed. The right iliac fossa was drained through a medium-sized tube.

The patient was infused with axillary saline during the operation and this was continued in the ward. The drainage tube was turned in twenty-four hours and in forty-eight hours was removed, a gauze drain being inserted in its place; a thin, fæculent, brownish discharge was emitted; on the third day after operation there was still some discharge.

The child hovered between life and death for some days, the seriousness of his condition being accentuated by a post-operative bronchitis. The wound continued to slough for some few days, hot fomentations being very efficacious. The patient was discharged from hospital one month after the operation, completely well.

Rose C., æt. 5, was admitted into Dorcas Ward, under the care of Mr. Dunn, on the 5th of December, 1916, suffering from abdominal pain.

On Wednesday, the 28th of November, 1916, the child complained of pain in the abdomen, indicating the umbilicus as the chief seat of pain. She vomited some three or four times on the same evening, but not since. The bowels were opened twice on the Wednesday, twice on Thursday, they were not opened on Friday, but a dose of castor oil was given. The bowels opened twice on Saturday and twice on Sunday, the motions being very loose. The mother says no blood was present.

C.O.A.—The child did not seem to be in the same distress as the case reported above, but

complained of pain in the region of the umbilicus. There was definite tenderness in the right iliac fossa on palpation. The abdominal wall presented some rigidity, this being more pronounced in the lower right quadrant. A rectal examination proved negative. Acute appendicitis was diagnosed; an immediate operation was decided upon.

5/12/16.—Administration of ether was given by Dr. Shipway. Mr. Brogden operated under the supervision of Mr. Rowlands. The grid-iron incision was used. Some difficulty was experienced in finding the cæcum, which was lying above and to the left of the normal position. An intussusception was then found beginning at the ileo-cæcal valve. The valve had advanced about four inches, and had remained at the head of the intussusception. The operator experienced little difficulty in gently squeezing back the head and thus returning the gut to its normal position. Little inflammation had resulted; no adhesions had been formed. The appendix was not removed. No drainage tube was deemed necessary. The child made a speedy recovery.

James R., æt. 7, was admitted, under the care of Mr. Dunn, on the 28th of December, 1916, with acute abdominal pain. On the 26th December the child suddenly felt a pain in the right iliac fossa. He was not sick until the day of admission, when he had two attacks of vomiting, the vomit being fluid and of a "greenish" colour. The bowels were opened on Tuesday, the 26th, not on Wednesday, but slightly on Thursday, 28th. He has always complained of the pain "being in the right iliac fossa."

C.O.A.—Pulse 112, temperature 97·2°, respiration 28. The child complained of pain in the abdomen, on the right side only. The rigidity of the abdominal wall was more pronounced in the right lower quadrant and pain most marked in the region of McBurney's point. No abdominal tumour was palpable. A rectal examination gave a negative result. Appendicitis was diagnosed.

The patient was anæsthetised with a mixture of chloroform and ether, followed by ether. The usual grid-iron incision was made for the operation of appendicectomy, but on opening the peritoneal cavity it was found to be a mild case of intussusception, and this of cæcum into cæcum. The cæcum just lateral to the vermiform appendix had invaginated the rest of the cæcum in an upward direction for about an inch, and about three or four inches of the ileum near the ileo-cæcal valve was somewhat inflamed. No obstruction or polyp was found. There was, however, no second intussusception here of the nature of the more common ileo-cæcal type. The appendix was found to be slightly inflamed and was removed. The wound was closed without drainage. The child made a good recovery.

There are four points of special interest about these cases:—

1. The age incidence. All these cases are well above the normal age limit for acute intussusception.

2. The complete absence of any history of the passage of blood or mucus in the stools.

3. No sausage-shaped swelling could be detected in any of these cases.

4. The recovery of the first case after resection, which is extremely rare.

G. A. S. SHACKLOCK.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Instruction in Radiography, Actinotherapeutics and Medical Electricity.

A course of instruction in the above subjects has been recently instituted at the Hospital. The full course lasts six months and is open to nurses and others, who will thus be able to acquire knowledge and training which will fit them to assist practitioners specialising in these subjects or to obtain appointments in hospitals where they will work under the supervision of the experts in these departments.

A prospectus of the course can be obtained on application to the Matron's Office, and prospective candidates are interviewed without previous appointment any Tuesday or Friday morning from 10.30 a.m. to 12.0 p.m.

Courses commence on January 1st, April 1st, July 1st, and October 1st in each year. Three months are spent in the Radiographic Department, where students will be given clinical instruction as well as instruction in the development and printing of X-ray photographs. Six weeks are devoted to clinical work in the Actinotherapeutic Department, and six weeks in the Electrical Department. Lectures will be given by Dr. Fison on Elementary Electricity, by Dr. Iredell on Actinotherapeutics, and by Dr. Ryffel on the Chemistry of Photography, while clinical demonstrations on medical and surgical Radiography will be held by Dr. Lindsay Locke and Mr. Shenton respectively.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

Weil's Disease, or Spirochætal Jaundice.

SIR,—I have read Dr. P. P. Laidlaw's excellent article on "Weil's Disease: Infectious Jaundice: Febrile Jaundice" with great interest. Although it may be true that the nomenclature is, as he says, a matter of small importance, it is surely most undesirable that the name "Weil's Disease" should be retained. The association of Weil's name with infectious jaundice is simply due to the superior advertising ability of German physicians. As a matter of fact, the disease was first observed by Larrey at Cairo during Napoleon's Egyptian campaign in 1800; it was subsequently described by Ozanan in 1849, Monneret in 1859, Laveret in 1865, Lancreaux and Landouzy in 1882, and Mathieu in 1886, the year in which Weil's paper appeared. All of these writers gave as good descriptions of the disease as Weil, who spoilt his paper by laying stress on the accidental fact that some of his cases occurred among butchers. On two occasions I have seen cases of jaundice at Guy's—one due to growth and the other to gall-stones—seriously diagnosed as Weil's disease simply because the patient happened to be a butcher. As in all probability there are other forms of infectious or febrile jaundice, such as that which caused the Gallipoli epidemic, and which was probably a result of infection with an organism allied to the B. Paratyphosus A, the most suitable name for the disease would be spirochætal jaundice, which has the advantage of being simpler than spirochætosis icterohæmorrhagica, which was suggested by the Japanese investigators.—Yours truly,

Netley, A. F. HURST.
Jan. 14th, 1917.

Change of Address.

Douglas Allan, M.R.C,S., L.R.C.P., Furness Auxiliary Hospital, Harrogate.

M. M. Adams, from Pretoria to South African Military Hospital, Richmond, Surrey.

Surgeon S. W. F. Underhill, Royal Naval Hospital, Chatham.

Private A. Weinberg, S.A.M.C., 1st S.A. General Hospital, B.E.F., France.

L. Rabinowitz, 29, Lanark Villas, Maida Vale, W.

Lieut. A. J. McNair, R.A.M.C., c/o Messrs. King, King & Co., Bombay, India.

Sister J. B. N. Paterson, Cambridge Hospital, Aldershot, Hants.

Capt. H. E. H. Tracey, R.A.M.C., Oral Department, No. 6 General Hospital, B.E.F., France.

Capt. C. Duvall Bishop, R.A.M.C., Head Quarters, 23 Reserve Brigade, Stanhope Lines, Aldershot.

Surg.-Prob. W. A. Turner, R.N.V.R., H.M.S. *Seymour*, c/o G.P.O.

Temp. Surg. E. G. Schlesinger, M.B., F.R.C.S., R.N., from No. 18 Casualty Clearing Station, B.E.F., to No. 9 Red Cross Hospital, Millicent Sutherland Ambulance, Army Post Office, B.E.F.

Capt. W. R. Reynell, R.A.M.C., The Coulter Hospital, 5, Grosvenor Square, London, W.

Lieut. J. Allan Berry, R.A.M.C., No. 3 N.Z. General Hospital, Codford, Wilts.

Guy's Hospital Physiological Society.

A meeting was held on January 15th, when Mr. A. E. Sawday read a paper on Alcoholism. Dr. Pembrey occupied the chair.

Mr. Sawday restricted himself entirely to the physiological aspects of alcoholism. He first showed that alcohol was injurious to lower forms of life such as the medusa. In man these injurious effects were demonstrated in the degeneration of the liver and brain of a chronic alcoholist.

In moderate doses alcohol does not have such far reaching effects, but its action is none the less injurious. Alcohol is an undoubted cerebral depressant, the freedom and apparent brilliance of the after-dinner speech being due to paralysis of the highest centre, self restraint. Mental work is not so well done after taking alcohol; although the performer imagines that he is doing better.

It is generally believed that a "drop of something" is the best way of keeping the cold out. This is not the case, some of the lowest temperatures recorded in man have followed the taking of alcohol. Alcohol flushes the vessels of the skin which thus becomes warm, causing at once a sensation of general warmth and a considerable loss of heat to the surrounding atmosphere.

Another popular impression is that alcohol is good for the stomach. Mr. Sawday contends that this is not so, as alcohol reduces the rate of action of the gastric juices and has also a destructive action on its mucous lining.

The resistance to disease is lessened by even moderate taking of alcohol. Experiments on animals have shown this as well as the statistics of Insurance Companies who find that a total abstainer has a better prospect of life.

With regard to the food value of alcohol it is undeniable that it is oxidised in the body and saves the use of ordinary foods, but it cannot be called a food owing to its poisonous properties.

A very interesting discussion followed this paper. After its usual manner the debate wandered frequently from the subject, and the meeting soon found itself discussing whether a man had the right to commit suicide. Mr. Joffe considered that he had, and held his ground with much skill, withstanding all the attacks of Dr. Pembrey.

Honours for Guy's Nurses.

We are pleased to record that the following Guy's Nurses have been awarded the Royal Red Cross, First Class decoration :—

Miss E. C. Cheetham, Acting Matron, Q.A.I.M.N.S.; Guy's Hospital, Feb., 1896, to Aug., 1899.

Miss A. B. Nunn, Acting Matron, Q.A.I.M.N.S.; Guy's Hospital, Feb., 1903, to Oct., 1906.

Miss M. L. Potter, Acting Matron, Q.A.I.M.N.S.; Guy's Hospital, Aug., 1897, to Sept., 1900.

Royal Red Cross Second Class Decoration.

Miss E. J. Densham, Matron, Duchess of Westminster's Hospital, Le Touquet; Guy's Hospital, Feb., 1901, to March, 1904; Sister and Assistant Matron; Guy's Hospital, July, 1905, to Nov., 1912.

Miss M. Willes, Acting Matron, Q.A.I.M.N.S.; Guy's Hospital, Jan., 1904, to Jan., 1907.

Mentioned in Sir Douglas Haig's Despatch, Jan., 1917.

Miss A. I. Coward, Nursing Sister, Territorial Force Nursing Service; Guy's Hospital, July, 1901, to Oct., 1904.

Appointments.

R.A.M.C.

Lieut-Col. H. Hewetson has been appointed acting Colonel whilst employed as Assistant Director of Medical Services of a Division.

Major R. T. Collins to be temp. Lieut.-Col. whilst in command of a Field Ambulance.

Capt. H. E. H. Tracey, R.A.M.C., has been appointed to the Oral Department, No. 6, General Hospital, B.E.F.

Temp. Lieuts. to be temp. Capts.: J. L. Whatley, C. Witts, W. Wilson.

To be Lieuts. and granted the rank of temp. Capts.:

Temp. Capts. S. S. Crosse, J. A. Andrews, A. S. Taylor H. C. Godding.

To be temp. Lieut. M. E. A. Wallis.

Temp. Lieuts. relinquishing their Commissions: T. F. Wilson, H. A. Watney, H. Harrison, W. Bligh.

Territorial Force.

Lieut. to be Capt: S. Child.

Capt. (temp. Major): J. Young to be temp. Lieut.-Col. whilst commanding a Field Ambulance.

N.Z.A.M.S.

Lieut. J. Allan Berry has been appointed to No. 3, N. Z. General Hospital, Codford, Wilts.

Civil.

Douglas Allan, M.R.C.S., L.R.C.P., has been appointed Senior Resident Medical Officer, Furness Auxilliary Hospital, Harrogate.

F. N. Doubleday, L.R.C.P., M.R.C.S., L.D.S. Eng., has been appointed Dental Surgeon to King George Military Hospital.

Papers by Guy's Men.

C. P. Symonds, M.R.C.P. Lond., Temporary Captain R.A.M.C.: Traumatic hernia of the diaphragm proving fatal seven months after the wound.—*The Lancet*, Jan. 6th, 1917.

Lieut.-Col. A. J. Hull, F.R.C.S., R.A.M.C.: The treatment of burns by paraffin.—*B.M.J.*, Jan. 13th, 1917.

Capt. H. G. Gibson, R.A.M.C.: Agglutination reaction in typhoid and paratyphoid fevers.—*The Lancet* (correspondence), Jan. 13th, 1917.

W. M. Mollison, M.C.: Case of heart failure during an operation for the removal of tonsils and adenoids: heart massage through an abdominal incision: recovery.—*Proc. of the Roy. Soc. of Med.*, Dec., 1916.

M. S. Pembrey, M.D., and F. E. Shipway, M.D.: Observations upon air under masks during ether anæsthesia.—*Ibid.*

K. Goady, L.R.C.P., M.R.C.S., D.P.H. Cantab.: Note on the microscopic histology and bacteriology of gas gangrene.—*Ibid.*

Capt. E. E. Johnson, L.D.S.Eng. (attached R.A.M.C.): Ulcero-membranous stomatitis occurring among the troops.—*Brit. Dent. Journ.*, Jan. 15th, 1917.

Col. Charters J. Symonds, C.B., A.M.S., M.S. Lond., F.R.C.S. Eng.: Laminectomy in gunshot injuries of the spinal cord,—*The Lancet*, Jan. 20th, 1917.

W. Sampson Handley, M.S. Lond., F.R.C.S. Eng.: Traumatic rupture of the jejunum.—*Ibid.*

Lauriston E. Shaw, M.D., F.R.C.P.: A home medical service for the treatment of soldiers (correspondence).—*Ibid.*

Rugby Football.

GUY'S v. R.N.D. CRYSTAL PALACE.

The sailors from the Crystal Palace paid us a visit on Saturday, January 6th, at Honor Oak Park, but though they had one or two stars among them, such as Hives of Northampton and P.O. Addis, an old N.U. player, they were nothing like so good a side as last year. Still, for all that, they looked like giving us a hiding till well on in the second half, when we began to see more of the ball.

The game commenced with the sailors bustling us a good deal, but luckily they developed a passion for punting up field as soon as the ball reached their three-quarters, with the result Millett was able to clear back many times. Finding touch with these kicks, the famous full back assisted his side tremendously. Two tries were registered for the Navy before half time, but no conversion ensued in either case, so that we had no heavy margin to face when the second half commenced.

Guy's pressed at once, and playing up with splendid spirit Bekker dodged over, and Millett converting, we were soon within a point of level. The forwards were now going at full blast, Aspinwall taking the eye particularly, also Reitz who made a fine burst or two. A great round of passing got Blacklaws away, but the effort was stopped. However, Bekker, just after, got through again very smartly. The ball was unfortunately grounded before Millett was ready for the place kick and was consequently charged down. Just before the end Reitz gained a try in favourable position. The points, however, were not added to, and from now till the end Guy's stuck manfully to their game and easily held their own until the final whistle. Score:—Guy's, 1 goal 2 tries; R.N.D., 2 tries.

H. Millett (back); A. S. Blacklaws, C. L. Curle, R. Spong, E. C. Keet (three-quarters); E. C. Bekker, E. A. Leviseur (halves); F. Reitz, E. S. Phillips, J. E. Van der Merwe, H. O. Long, F. Leviseur, —. Brown, G. W. Aspinwall, V. Dreyer (forwards).

GUY'S v. HORSE TRANSPORT DEPOT, BLACKHEATH.

Played on Saturday, January 13th, at Honor Oak Park. On the morning of the match our opponents had the bad luck to have several men called upon to go away on draft, consequently the team that did duty was scarcely representative. It was a beastly day, very cold and wet, so two thirties were decided on. Considering all the difficulties of a greasy ball and the most precarious foothold, the football was not at all bad. As is natural on such a day many passes went astray, and many a man with a fine opening measured full length in the mud when success seemed within calculating distance. Keet was the first to score. He was well assisted by the other three-quarters; then Phillips, by dogged following up and smartly fixing on the ball, dribbled over for a second try, Keet shortly after gaining another. Curle most unselfishly worked this opening for the speedy wing player. Reitz kicked a goal from Phillip's try, and thus at half time we led by 11—0.

Never seriously troubled by the opposition we added two more tries during the second portion of the game, Thomas gaining one, after Bekker had finely opened up the game. Armstrong also was successful in gaining the other. The elements gradually got worse, and it really was most difficult to stand, which accounts for the comparative smallness of the score. Rawstron, the visitors' full back, should be commended for his display. He had not been convalescent very long and to turn out on such a day must have been very risky work. He had plenty to do, but our own full back, who scarcely saw the leather from commencement to finish, must have been very thankful when "no side" was sounded. Score:—Guy's, 1 goal 4 tries; Horse Transport Depôt, Blackheath, nil.

S. Rosencheim (back); E. C. Keet, C. L. Curle, G. M. Thomas, C. G. Coombs (three-quarters); C. Becker, F. Bekker (halves); F. W. Reitz, C. W. W. Armstrong, E. S. Phillips, J. C. Gie, N. B. Dreyer, J. E. Van der Merwe, G. R. Aspinwall, H. O. Long (forwards).

Publications received.

Army and Navy Gazette, Manchester University Magazine, The Hospital, New York State Journal of Medicine, The Nursing Times, Some Notes and a Prophecy by G. Arbour Stephens, M.D.

Births.

LYON.—On the 20th December, 1916, at the Pei-yang University, Tientsin, N. China, to Mr. and Mrs. Lyon—a daughter.

MACMANUS.—On New Year's Eve, at "The Cottage," Granville Park, Blackheath, to Lesley, wife of Captain Desmond MacManus, R.A.M.C.—a son.

Marriages.

BISHOP—JUDD.—On the 6th inst., at Farnham, Captain C. Duvall Bishop, eldest son of Mr. and Mrs. Duvall Bishop, of Stapleton Hall Road, Stroud Green, London, N., to Ethel, eldest daughter of Mr. and Mrs. J. W. Judd, of "Lyndhurst," Quernmore Road, Stroud Green, N.

WICKENDEN—HUNTER.—At St. Stephen's Church, Perth, on January 17th, by the Rev. J. H. Henderson, M.A., Captain Stanley Wickenden, R.A.M.C. (S.R.), to Mary Stewart, daughter of Mr. and Mrs. Robert Hunter, of St. Johns, Perth.

J. J. C.

GUY'S HOSPITAL GAZETTE.

VOL. XXXI., No. 746.] FEBRUARY 10, 1917. [SIXPENCE.

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Passim.

IT is our somewhat depressing duty to bid farewell to a very large number of the Residents, who are leaving us to join the Services. Their departure leaves the Hospital with comparatively few men who were in the wards in pre-war days, and those who are left behind cannot help feeling that there has been a considerable break with the past. We can only hope that they will be as successful and popular in their new spheres of activity as they have been here.

Were we to attempt to deal individually with the careers of all those who are leaving us, we should overtax both our ability and the space at our disposal. We feel, however, that we cannot allow Mr. C. H. Medlock to leave us without an attempt being made to express our appreciation of him. While many of those who are now House Officers, or soon to become so, were still insignificant first year students, Mr. Medlock was already a great personality here, one who was pointed out to them as he walked through the colonnade, and whose fame in the athletic world had spread far beyond Guy's. But those of us who have been here since the war know well that his fame was not confined to athletics. After a period spent on active service in France with the Artists' Rifles he returned to qualify, and has held several house appointments with great distinction. On February 1st we bade him, as President of the Residents, farewell, and we can say with complete sincerity that those who have worked with and under him never hope to meet a more pleasant companion in work or in play or one who will win their respect and admiration more completely.

Another link with the past is now broken by the departure of Mr. Samuel Wilson. He has been a familiar and popular figure in the Hospital for many years, and has done good service in filling appointments here. We wish him every success in his new duties in the Navy.

THE election of Mr. E. S. Bowes as President of the Residents has been received with general satisfaction. Mr. Bowes has done Obstetric Resident and at present holds the appointment of H.-S. to Sir Alfred Fripp. We feel sure that he will be a worthy successor to Mr. Medlock.

ON February 1st the new system of House Appointments necessitated by War conditions came into force. Put briefly the main feature is that there are now only eleven appointments for qualified men instead of twenty. This drastic reduction has been effected by only having

two House-Physicians instead of four, two Out-Patient Officers instead of four, and two Obstetric Residents in place of three, while the appointments of Assistant House-Surgeons have been abolished. There is now no Ophthalmic House-Surgeon, but his place is taken by a Resident known as the 5th House-Surgeon and Resident Anæsthetist. Minor changes are that the Out-Patient Officers are now provided with rooms and food and that the 5th House-Surgeon has charge not only of the Eye Ward, but of the Septic Wards.

As any old Guy's man who has done O.-P.O. will know, it is quite impossible for two men to do the work in the Out-Patient Department and the Surgery without assistance. It is, therefore, proposed to appoint four unqualified assistants with the title of Assistant Casualty Officers. They will work for only three days a week each, in order to allow them to read for their final examinations. Similarly the two House-Physicians are to have four unqualified assistants known as Assistant House-Physicians. One of these will be posted to each Physician on the Staff.

The care of the patients in the Officers' Section is no longer to be undertaken by the House-Surgeons and House-Physicians, but a new post is to be created known as Resident Medical Officer to the Officers' Section.

This Resident will receive an honorarium at the rate of £150 per annum, be provided with board, and will occupy the rooms of the Resident Medical Officer of Bright Ward. In addition to his duties in the Officers' Section he will exercise a general supervision over Bright Ward, and will also be available for consultations with House-Physicians and House-Surgeons on cases in the General Wards. The giving of anæsthetics will not be an essential part of his duties, and he will not be expected to give them.

Whether the scheme is one which will prove to be practicable remains to be seen, and mainly depends on the attitude taken up by Guy's men themselves. Naturally the work of a Resident will now be much heavier than in former days. When the number of men qualifying in any three months is less than 11, it is hoped that there may be some men available who, on account of their medical unfitness or their nationality, will not be liable to be called up at the end of their first three months' service, and the Hospital will rely on their loyalty to enable the scheme to be carried on. Further, the unqualified assistants in the Out-Patient Department are absolutely essential under the scheme, and its success largely depends on their coming forward.

Unfortunately many provincial hospitals, finding difficulty in obtaining qualified residents, are now taking fifth year students with small salaries as residents. This we fear may tempt unqualified men who have done the essential appointments at Guy's to neglect the opportunity of taking unqualified appointments here. Further, the introduction of paid resident appointments for unqualified men is very apt to lead to delay in qualification, which will be extremely detrimental to the National Services.

Among other changes that have taken place recently is the suspension, through the absence of Mr. Tanner, of the post of Resident Surgical Officer. The Surgeons of the Special Departments have kindly offered to relieve the pressure thrown on the General Surgeons by taking a share of the "Take-in" work, and the other duties formerly carried out by the R.S.O. have been distributed in various ways. We confess that we cannot believe that this delegation of duties is going to lead either to greater efficiency or to economy in personnel.

AT the time of going to press some of the new appointments are still vacant, including

that of Resident Medical Officer in the Officers' Section. We have already outlined the duties of this new post, and it will be obvious to all that it is an opportunity of obtaining a great deal of very valuable clinical experience, both surgical and medical. As House Officers will be comparatively recently qualified, his assistance will probably be invoked in most cases of interest or urgency. The appointment is one which is admirably suited for a man who is not liable for general service in the R.A.M.C. and who has already had the experience of the ordinary qualified appointments.

The response to the call for unqualified appointments has not up to the present been as good as might have been expected. The experience which could be gained in holding these appointments will, we feel sure, go a long way towards compensating for the short time allowed by the War Office for qualified appointments. Further, all unqualified men who are not holding the regular ward appointments should consider it their duty to do their best to help to run the Hospital by applying for unqualified appointments, especially as they will thereby benefit themselves as much as the Hospital.

We have received copies of the Standing Orders for Assistant House-Physicians and Assistant Casualty Officers, which we print below. It will be noted that in addition to unrivalled opportunities of obtaining practical experience, the holders of these appointments will be provided with rooms in the College.

Standing Orders for the Assistant House-Physicians.

1. The Assistant House-Physicians are appointed by the House Committee upon the recommendation of the Medical Committee, and hold office for three months, being eligible for re-appointment.

2. The appointments will commence on February 1st, May 1st, August 1st, and November 1st, and applications will be received at the same time as those for House Appointments.

3. Assistant House-Physicians will be provided with rooms in the College, but not with board.

4. The Assistant House-Physician shall attend the Physician to whom he is attached on his visits to the Wards and shall assist the House-Physician in the Wards and "Taking-In" Rooms.

5. A fixed number of beds shall be set aside into which the Assistant House-Physician may admit cases, and the patients in these beds shall be treated by him under the supervision of the Physician and the House-Physician. He shall not, however, be expected to write the reports in these cases.

February, 1917.

Standing Orders for the Assistant Casualty Officers.

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2. The appointments will commence on February 1st, May 1st, August 1st, and November 1st, and applications will be received at the same time as those for House Appointments.

3. Assistant Casualty Officers will be provided with rooms in the College, but not with board.

4. Each Assistant Casualty Officer with one of the Out-Patient Officers constitutes a "pair" whose duties are set out in the Standing Orders for Out-Patient Officers, and he shall carry out these duties under the supervision of his qualified colleague.

5. In cases of doubt he shall consult his qualified colleague, and shall take care not to sign any certificate for which the signature of a registered Medical Practitioner is necessary.

February, 1917.

At a General Court of Governors, held on Friday, the 2nd instant, the Right Hon. Earl of Granard, K.P., G.C.V.O., was elected a Governor to the Corporation.

At the last Court of Committees the resignation, on account of ill-health, of the Matron (Miss L. V. Haughton) was accepted with regret, and Miss Margaret Hogg was appointed Matron. In our next issue we hope to publish an account of Miss Haughton's work for the Hospital and the Nursing Profession.

The Treatment of Wounds.

Lycée Pasteur Buffon (Paris).

In this hospital Dr. Chutro has charge of some 250—300 beds. The beds are not all filled with wounded, a fair number of routine surgical cases, *e.g.*, herniæ, appendices, varicose veins, etc., being admitted. The wounded are received directly from the Clearing Stations at a varying interval after receipt of the wound of from four to twenty-one days. Since, however, Chutro's work on compound bones and joints, especially of the lower limb, is becoming recognised, many such cases are being transferred to him in increasing numbers. A few of these received their wounds in the latter part of 1914, and others at varying times since then. These are chiefly cases of chronic bone sinuses, and mal- or non-united fractures. The conditions are those of an ordinary Home Military Hospital (the building being converted from a school) as regards the number of staff, equipment for bacteriological work, radiography, etc.; neither of the two latter departments, however, is in charge of an expert. Dr. Chutro operates on all his cases, and dresses the bone and joint cases himself afterwards, until they are discharged from hospital.

I would emphasise the conditions at this hospital, comparing it directly with the Carrel Ambulance. The chief criticisms brought against this latter hospital are the large medical staff in proportion to the small number of beds (seven qualified men to 80 beds), a greater number of nurses and orderlies, comparatively, than is obtainable in army hospitals, enabling a minute attention to each case, the general, almost luxurious, surroundings, and the fact that a number of the best results are only kept for show purposes. (It must be remembered that the original idea of this hospital was for experimental purposes, and that it is now used for the purpose of demonstrating a particular treatment and what is possible by it.) None of these critcisms can in any way be made against Chutro's wards.

The main line of treatment here is based on Carrel's methods, with modifications chiefly towards simplicity and improvement as regards the treatment of fractures.

Dakin's solution is used of the same strength (0·45—0·50 per cent.), and is passed into the wounds by similar tubes and apparatus. The wound is irrigated every two hours and about the same quantities used. In order to prevent any chance of the solution escaping into the bed, the limbs are placed on metal trays which can be emptied, if necessary, by a tube leading off from one corner, without disturbing the patient. If the tubes are properly in position and the dressings well placed, very little, indeed, escapes. Chiefly through lack of assistance and time, the dressings are done every other morning. The same minute attention is not given as at Compiegne. The dressings and tubes are removed, the wound swabbed, and fresh tubes and dressings applied. (If thought necessary vaseline is applied to the surrounding skin.) The dressings are surrounded by a large pad, specially designed for the position of the wound; this is fastened by safety pins, and not bandaged. The same care is taken to avoid handling any tube or dressing going into the wound.

As regards operative procedures, I shall confine my remarks chiefly to the treatment of compound fractures of the lower limb and knee-joints. The same rule applies, *i.e.*, the greater the amount of sepsis, the less the surgical interference, always provided there is no pus under tension, or spreading inflammation. In cases of injury to the knee-joint, aspiration is done, if the joint is distended with fluid or blood only; if pus is present, openings into the joint are always made, parallel to, and

about the same length as the patella, and Carrel's tubes passed into the joint, two from either side. At the same time a metal extension stirrup is applied, and 5 kilos weight afterwards added. (This stirrup I shall describe in a later paragraph.) The after treatment depends on the progress. If after 48 hours the condition is satisfactory, the tubes are removed from the outer wound, which is allowed to close, and irrigation is continued through the two in the inner wound.

A point is made that the incisions do not open the supra-patella pouch in the early cases; otherwise the pouch becomes obliterated with consequent fixation of the quadriceps and patella, and loss of movement.

In later cases, posterior incisions may also be made, or any procedure thought advisable to enable the irrigation to reach all parts of the joint. Complete opening of the joint with division of the patella ligament or excision of the joint is never done.

In cases where injury to the joint is complicated by a compound fracture of the lower end of the femur or upper end of the tibia, openings are made accordingly, so that the site of fracture and joint can be efficiently irrigated. Completely loose fragments of bone are removed and tubes, as far as possible, inserted into the bony interspaces.

There were in the hospital some twenty knee-joint injuries, uncomplicated and otherwise. In one only of these was there any pus. In this case the posterior incision had been allowed to close, and pus had collected deep to it, showing that a careful watch must be kept on all posterior wounds, if they are allowed to close. In all the cases the wounds appeared healthy with fine granulations; ther was no indication in any of them that healing would be difficult, nor did there seem the least likelihood of loss of any of the limbs. The general appearance of the patients was good, tongues clean, and very little pain.

As soon as the acute infection has subsided some slight movements of the joint are encouraged, usually as much as the extension will permit.

I have seen several cases of this type walking about with sticks or crutches, with the wounds soundly healed. There were some five to ten degrees of movement possible in those cases that had come under treatment reasonably early. The patella was not fixed, and there was the possibility of a greater range being obtainable. In the later cases, or the complicated ones, there is no movement, but, though stiff, the limbs appear to be useful with a minimum of pain.

The compound femurs are striking, not only from the almost complete absence of suppuration, but also because of the good alignment and maintenance of length obtained by the method of extension used. Abduction is maintained by applying extension to both limbs, the metal stirrup to the injured side and an ordinary adhesive plaster extension to the other leg, the limbs being separated by fixation made to each side of the end of the bed.

Dr. Chutro scarcely ever performs secondary suture in these cases of joint and bone injury, the wounds being allowed to heal by granulation. In those cases, where severe wounds had healed, the average time was from two to three months. There were about twenty cases with the wounds still open that had been admitted in August and September, 1916. The impressive fact, though, was that many of these limbs had not been amputated. In some the wounds were necessarily kept open to allow separation of necrosed bone, but in others it appeared to the onlooker that closure was indicated to prevent as far as possible adhesions between the bones, muscles, and skin. (In this respect a most striking feature of the closed wounds seen at Compiegne was their softness and mobility.)

It would seem that the bacteriological control of these wounds is most important and would allow closure to be done at an earlier stage with a minimum of risk.

In cases where there is complete loss of substance of a bone, the length of the limb is maintained by means of the extension, till the condition is suitable for further measures. As a general rule the wound is allowed to heal completely before bone-grafting or nerve-suturing is performed.

All these injuries to the lower limb are nursed on fracture boards. I have seen very few compound fractures of the upper limb in this hospital, but they are treated on similar lines.

In cases of injury to the humerus, Leclercq's extension apparatus is used, but I have not seen it actually in use. Very occasionally excision of the shoulder is performed, but as a general principle, excision of any joint is avoided as a primary measure.

I have no doubt in my own mind that the essentials producing such good results in these difficult cases are :—

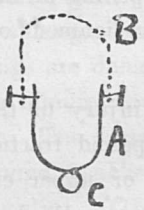
1. The very complete immobilisation and muscle relaxation effected by this particular method of extension.

2. The efficient sterilisation possible by Carrel's methods; and

3. Lastly, but not least, Dr. Chutro's sound surgical judgment, and his individual attention to each case while in hospital.

The metal extension stirrup has been in limited use now for some four years, and is a modification of the method of extension obtained by weights attached to a bar passed through the os calcis.

The following rough diagram shows the essential parts. A is of rigid steel with a small ring C to which the cord suspending the weight is attached. B is flexible, and fastened to A with screw nuts. By means of a guide, sharply pointed at one end, and attached for the purpose, B is passed over the superior surface of the os calcis, immediately anterior to the tendo-Achilles. For this purpose the foot is held firmly dorsiflexed, and a small incision made on the outer side of the heel about 1 c.m. below the level of the superior border of the bone and just in front of the tendon. The sharp end of the guide is passed through this, and following closely the upper surface of the bone, is brought out correspondingly on the inner side of the heel, the guide is removed, and the flexible and rigid parts of the stirrup fastened together. Small dry pads are placed between the metal the skin, and copious dressings and bandages applied to completely cover the whole stirrup. This is best done under a local anæsthetic unless some operative procedure on the limb has made a general anæsthetic necessary.



The skin is not pulled up or down before the incision is made. Attention to small detail is very necessary, otherwise pain is felt from pressure on skin edges, or against the tendon when the weight is applied. After this, the stirrup is not placed at right angles to the foot, but inclined slightly upwards. The cord holding the weight is passed over a small pulley at the end of the bed. The pull is against the body weight. A weight up to 7 kilos (nearly 15½ lbs.) is applied (this for fractured femurs); it has been found that a greater weight than this is harmful and unnecessary. The pull by this method of extension is directly on the bones and muscles. The foot is unable to drop. The toes which are mechanically flexed during its

application, should be daily moved and massaged. The dressings applied must form a firm pad to the sole of the foot and base of the toes to control any tendency to a "caval" position.

At first sight the use of this stirrup appears to be contrary to many primary surgical principles; it is, however, a distinct improvement on the methods of extension in which metal rods are passed through the condyles of the femur, malleoli, or os calcis. The wounds made are small and quickly heal after removal of the stirrup. In one case only did I see any suppuration of the stirrup wound, and in this the lower third of the tibia was compound and septic. In similar injuries its use is probably dangerous, and possibly a non-metal substitute would be preferable. In the cases that I have seen some weeks and months after removal of the extension, there was no loss of power in the foot, no tendency towards calcaneus, no pain from mechanical action on the ankle or tarsal joints, and no tenderness of the scar or heel.

Clinically a very complete immobilisation and relaxation of muscles is obtained, most essential points, and not easy to obtain by the usual extension methods. The almost complete absence of pain from muscle spasm is very striking. When it is found necessary to lift the limb, a steady pull is maintained on the stirrup. The longest period that the stirrup has been kept continuously applied in this hospital is ten months, but this is altogether exceptional. Up to two or three months is an average time, depending on the nature and progress of the injury.

As stated, many cases of old bone sinuses are now being sent under Dr. Chutro's care. A simple and effectual procedure is carried out. A suitably long incision is made, and the soft parts immediately surrounding the sinus excised. The site of suppuration in the bone is completely exposed. The callus forming the wall of the cavity in the bone is completely removed on one aspect, the whole cavity being thoroughly laid open and scraped. Carrel's tubes are now placed in position and dressings applied. Irrigation is carried out as usual, but the tubes, unless they become blocked, are not changed for some days. The main idea is to lay open the cavity in the bone, sterilise it, and then to allow the soft tissues—the quadriceps especially—to fill the cavity. When in the usual curetting operation done for this condition, the necrosed bone is removed, the bony walls do not fall in to fill the cavity, and as the methods of sterilisation are not satisfactory, the sepsis spreads still further with consequently more necrosis.

In cases of old fractures of the femur with mal-union and consequent shortening, an osteotomy is done, an extension stirrup applied, and sterilisation carried out. In both these, and the cases just described, the wounds are either allowed to heal or sutured when sterilised.

The same bacteriological routine is not done here as at Compiegne. Films are made and the type and number of organisms estimated from the point of view of interest rather than as a record of the wound. The clinical aspect of a wound is studied first and the bacteriology second, when suture is contemplated. It would seem, however, that a routine bacteriological examination is a valuable control.

There are at present so many different treatments being carried out by different surgeons for these war wounds of bones and joints, each with certain success, that it is difficult to choose any one and say "This is the best." The aim of all is to produce a surgical sterilisation of the wound, when it will heal, or may be closed. The treatment which will produce this in the shortest time, and is applicable to the largest number of cases is the one that will hold the field. For this a simple line of treatment based on scientific principles must be the aim. It is always difficult to advocate any particular ideas

by writing; it is often dangerous, as the ideas are half carried out with consequent failure, or entirely neglected. It is so necessary that the cases should be seen. I can say truthfully that I should have disbelieved anyone who described these cases of Dr. Chutro's to me. It is a fact, though, that since January 1st, 1916, he has performed three amputations only. One was a case of a compound humerus in a man with progressive pulmonary tubercle. The other two, compound femurs admitted to the hospital with a severe septicæmia.

The recent discussions that have taken place about the treatment of war-injuries to the knee-joint, remind one that drastic measures were advocated to prevent a spread of the sepsis and toxic absorption that was looked on as inevitable. In cases where the joint injury was complicated by a compound fracture, and infection present, early amputation was advocated as the best line of treatment, and my own small personal experience led me to look on this view as the best, though unsatisfactory. A criticism may be brought against Dr. Chutro that he is saving limbs which are only going to be encumbrances afterwards, but since there is no continuous sepsis, and a minimum of pain, it cannot be said that life is being endangered or shortened by doing so. He is for the minute a faddist going to extremes in order to estimate the value of a treatment, and to convince prejudiced onlookers. I do not say, therefore, that in future no secondary amputation should be performed, but do maintain that a simple and efficient method is being worked at whereby a great diminution in the amount of suppuration, and a greater saving of limbs, ought to be accomplished.

F. D. SANER.
No. 9 Red Cross, B.E.F. F.R.C.S.

Since the above article was written, a book has been published on the subject by Carrel and Dehelly. Its title is "Le Traitement des Plaies Infectées," par A. Carrel et G. Dehelly, published by Masson et Cie, editeurs, 1917.

Appointments.

R.A.M.C.

Temp. Capt. C. D. Pye-Smith to be temp. Lieut.-Colonel whilst in command of a Field Ambulance.

Majors to be Acting Lieut.-Colonels whilst in command of a General Hospital.—W. C. Wetherell, A. W. Gater.

To be Lieutenants.—G. C. Robinson, H. C. Pryn (from R.A.M.C., S.R.).

To be temporary Captain.—F. H. Knaggs (whilst employed at the Huddersfield War Hospital.

To be temporary Lieutenants.—J. B. Howell, R. Roberts, J. Harper, N. Flower.

Captains from R.A.M.C. Special Reserve to be Lieutenants, and granted the rank of temporary Captain.—Capt. W. L. E. Reynolds.

Temporary Captains relinquishing their Commissions.—G. E. Genge-Andrews, R.A.M.C. (Territorial Force). Capt. K. B. Clarke relinquishes his command on account of ill-health.

South African Medical Corps.

H. Sterne-Howitt has been gazetted a Captain in the South African Medical Corps, and is stationed at the S.A.M. Hospital, Richmond, Surrey.

Army Dental Appointments.

G. W. Wheldon has been appointed Army Dental Surgeon with the rank of temporary Lieutenant.

Temporary Lieutenants to be temporary Captains.—S. H. Jones, A. A. Forty.

Civil.

C. J. Creasy, M.R.C.S., L.R.C.P., has been appointed District and Workhouse Medical Officer at the Ringwood Union.

Change of Address.

Temporary Lieutenant A. Traill, R.A.M.C., 2, Kensington Place, Blackpool.

Capt. S. S. Crosse, R.A.M.C., 18th Batt. King's Royal Rifle Corps, B.E.F.

J. A. Bouic, 2nd Lieut., R.F.C., Vendôme, France.

Capt. J. L. Percival, R.A.M.C. (S.R.), from No. 10 General Hospital, to No. 19 Ambulance Train, B.E.F.

Capt. P. R. Boswell, R.A.M.C., from 96th Field Ambulance, B.E.F., to 149th Brigade, R.F.A., B.E.F.

(The Editor will be very glad to receive a post card with notes of any change of address.)

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

[We would point out that we cannot *under any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—ED., G.H.G.]

SIR,—May I be permitted to make a few trifling additions to the valuable list of hints intended for the benefit of those about to join the R.A.M.C., contained in your edition of January 27th.—

1. It is not necessary to salute the Mess waiter.
2. Don't mistake the canteen manager for Lord Derby.
3. Inebriates on entering camp automatically find themselves in the guard-room. There is no reason to believe, however, that it has yet attained the social status of Gray's Lodge.
4. Do not make a habit of using the Colonel's tooth brush—He may resent it.
5. State briefly, in writing, any events which would lead you to give the Adjutant (*a*) A week's sick leave. (*b*) A. No. 9. Indicate clearly in your answer the absolute advantages and disadvantages of each proceedure from the point of view of (*a*) Yourself. (*b*) The Adjutant.
6. In lieu of kit, very few carry Army Ordnance Department, Index and Vocabulary of Stores, Parts I. & II., but you might obtain a howitzer from them in time.
7. I don't think you will need a piano.—I have the honour to be, Sir, your obedient servant,

28.1.17. ANXIOUS MOTHER.

[We venture to think that if Anxious Mother visits the "Front," she will find a piano more use than the howitzer she sugguests.—ED., G.H.G.]

Three Cases of Intussusception.

SIR,—In the issue of the GAZETTE of January 27th, there appears a valuable account, by Mr. G. A. S. Shacklock, of Three Cases of Intussusception. There are one or two details and remarks which I should like to add to the account of the first of these cases. The boy was seriously ill and had also slight bronchitis. I decided to give him as an anæsthetic warm ether, in spite of his chest condition, because chloroform anæsthesia in patients with septic conditions is known to be frequently followed by "delayed chloroform poisoning," which often proves fatal. Accordingly a hypodermic injection of $\frac{1}{200}$ gr. atropine was given shortly before induction, which was started for the first two minutes with C_2E_3, and finished with warm ether. When it was found that the case was one which was free from sepsis but which necessitated a long operation, I thought that, taking all things into consideration, chloroform and oxygen would give the boy the best chance of recovery. However, a light anæsthesia with this agent soon produced so much circulatory depression that I felt convinced that the boy would not recover from the shock of the operation. I returned, therefore, to warm ether and oxygen, realising that this would give him a better chance of immediate recovery, and that he must run the risk of a serious aggravation of his chest condition. At the end of anæsthesia, which lasted 53 minutes, the pulse was rapid, but the forehead was warm and the rectal temperature, which had been 99·6° immediately before induction, had, instead of falling, risen to 100·2°. I therefore felt comparatively hopeful about his prospects. That he would have recovered without the stimulating effect of ether is, I think, very doubtful; that the warm ether improved his chances is, I believe, true.

It is of interest to compare the second case, in which open ether was given. The child was in a better condition, the operation was less serious, and anæsthesia lasted 32 minutes. The rectal temperature fell 1·6° F. There was very little difference in the temperature of the theatre in the two cases. I do not base my belief in the virtues of warm anæsthetics on this one case; observations in many cases point in the same direction. It is particularly in the border-line case that the body temperature should not be allowed to fall.—I am, yours truly,

FRANCIS E. SHIPWAY.

Honours.

C.B.

Sir Arbuthnot Lane, Bart., M.S., F.R.C.S.

C.M.G.

Colonel H. Davy, R.A.M.C. (T.F.).
Lieut.-Col. (temp. Colonel) H. P. W. Barrow, R.A.M.C.

Mentioned for Distinguished Services

The names of the following Medical Officers have been brought to the notice of the Secretary of State for War, for distinguished services rendered in connexion with the war:—

Lieut.-Colonel H. P. W. Barrow, R.A.M.C.
Lieut.-Colonel H. Davy, R.A.M.C.
Lieut.-Colonel Sir Arbuthnot Lane, Bart., R.A.M.C.

Papers by Guy's Men.

J. A. Ryle, M.B., B.S. Lond., in collaboration with A. Stokes, M.D. Durham, F.R.C.S. Ireland, and W. H. Tytler, Canadian R.A.M.C.: Weil's Disease (spirochætosis ictero-hæmorrhagica) in the British Army in Flanders.—*The Lancet*, Jan. 27th, 1917.

The Relation between Body-weight and Body-length (Stem length).

PHYSICIANS are in the habit of consulting tables which give the mean weight of the individual compared with his height in helping to decide whether a patient is too thin or too fat. This method is used particularly in insurance work. The results are, however, unsatisfactory, as the limits of variation are so wide in healthy people, and further there does not seem to be any simple relation between these two measurements.

Ainley Walker (Proc. Roy. Soc. B. 89, p. 157, 1915) has measured the distance from the top of the head to the ischial tuberosities, and compared these values with the body weight in a number of healthy individuals ranging from babyhood to adult age, and finds the following simple relations to hold good for the mean values throughout the range :—

$$L = 6{\cdot}91\ W^{0{\cdot}33} \text{ for males.}$$

$$L = 7{\cdot}14\ W^{0{\cdot}32} \text{ for females.}$$

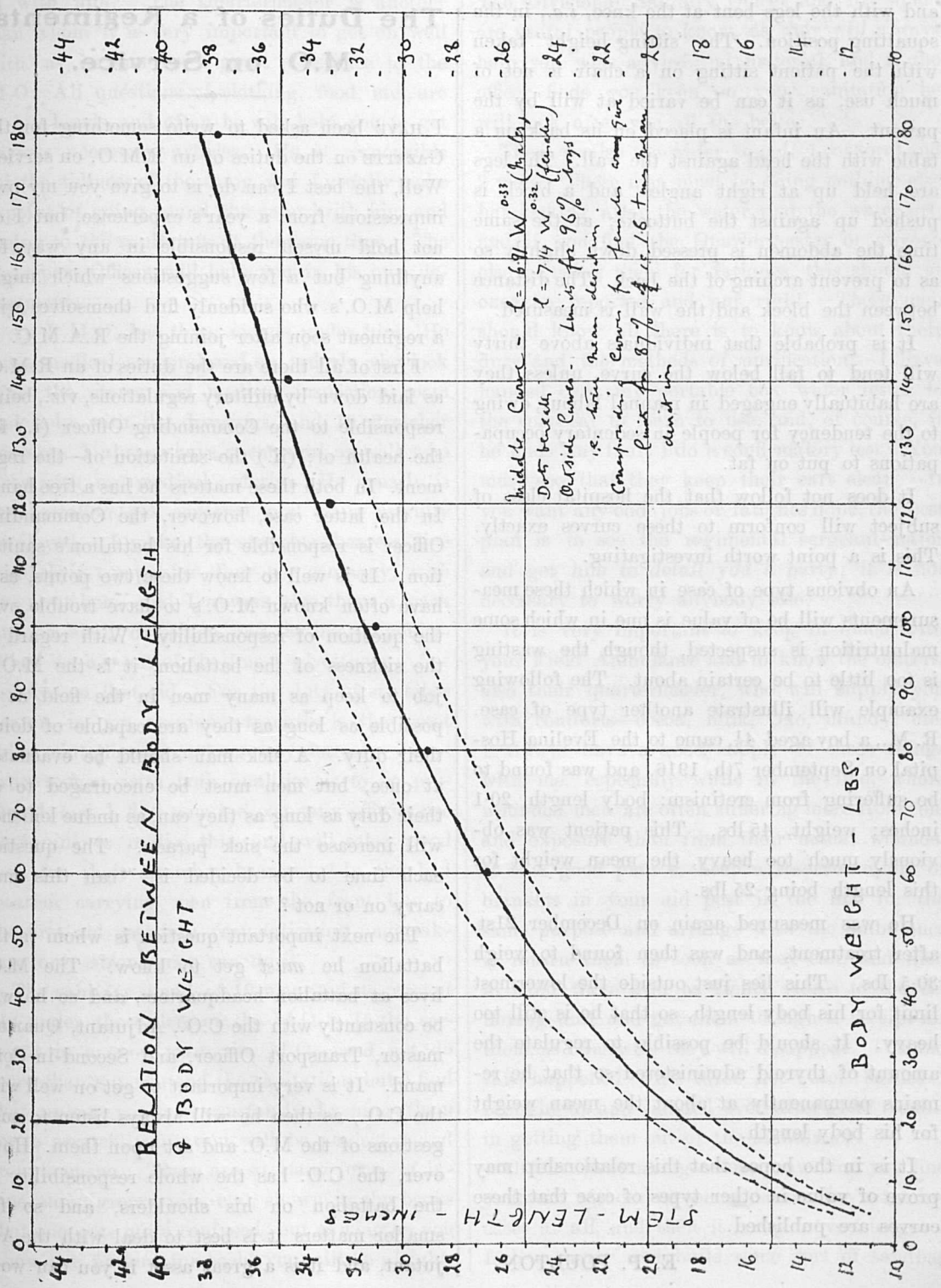
When L is the body-length in inches, and W is the body-weight, naked, in pounds avoirdupois. Further, by the method of least squares, the mean deviation is found to be 3·4 per cent. in the case of boys and 4·2 per cent. in the case of girls. This means that practically all normal individuals fall within 8 per cent. of the mean values for the body-length and 85 per cent. of normal individuals will fall within 6 per cent. of this value.

In the diagram the middle black curve represents the relationship of the mean values for boys and men, and is calculated from the above formula. The curve for females is practically identical with the curve for males in its lower half, but higher up it falls away slightly from the curve for males, as shown by the black dots. In other words, women are slightly heavier for a given body-length than men are, possibly owing to increased fat. The dotted lines are drawn so that the vertical difference between each of them, and the mean curve for males is 6·8 per cent. of the body-length (*i.e.*, twice the mean deviation). The advantage of drawing these outside curves is that they more or less represent the limits of normal variation. To be precise, 96 per cent. of all normal individuals will fall within these limits. Consequently, if any individual lies outside these limits, he will almost certainly be pathological, and if he falls inside the dotted lines, but close to them, he will quite likely be pathological.

The corresponding outside curves for women are not drawn, but in the upper half of the curve they can readily be imagined as falling practically the same distance below the dotted curves, as the mean female curve does below the mean curve for males. There is this distinction, however, that, as the mean deviation for females is slightly greater than for males, the outside curves will contain 87 per cent. of all normal values, instead of 96 per cent. However, for all practical purposes these outside curves may be taken as representing the normal limits of variation both for males and females.

It is as well to say a word about the material used for these statistics. All the subjects were of the so-called better class. Only comparatively few babies were measured, so that there is some doubt about the values below 20 lbs. The boys and girls were at various schools; their average weights and heights for each year of age were above those usually given in tables for the general population. In all, 223 individuals were measured. In addition, Schuster's measurements of 1,500 Oxford undergraduates were also used, but these were not included in calculating the mean deviations.

In taking the body-length measurements it is necessary to get the patient to sit on the floor with the back and pelvis touching the wall


RELATION BETWEEN BODY LENGTH & BODY WEIGHT
BODY WEIGHT - LBS.
STEM - LENGTH - INCHES
Middle Curve - l = 6.91 W^0.33 (Males)
Dots beneath - l = 7.14 W^0.32 (females)
Outside Curves - Limits for 96% boys
i.e. three mean deviation
Corresponding Curves for females are given
Limits for 87% i.e. 1.6 times mean deviation

and with the legs bent at the knee, *i.e.*, in the squatting position. The "sitting height" taken with the patient sitting on a chair is not of much use, as it can be varied at will by the patient. An infant is placed on its back on a table with the head against the wall. The legs are held up at right angles, and a block is pushed up against the buttocks; at the same time the abdomen is pressed down slightly so as to prevent arching of the back. The distance between the block and the wall is measured.

It is probable that individuals above thirty will tend to fall below the curve, unless they are habitually engaged in manual labour, owing to the tendency for people in sedentary occupapations to put on fat.

It does not follow that the hospital class of subject will conform to these curves exactly. This is a point worth investigating.

An obvious type of case in which these measurements will be of value is one in which some malnutrition is suspected, though the wasting is too little to be certain about. The following example will illustrate another type of case. R. M., a boy aged $4\frac{1}{2}$, came to the Evelina Hospital on September 7th, 1916, and was found to be suffering from cretinism: body length, 20·1 inches; weight, 45 lbs. This patient was obviously much too heavy, the mean weight for this length being 25 lbs.

He was measured again on December 21st, after treatment, and was then found to weigh 30·5 lbs. This lies just outside the lowermost limit for his body length, so that he is still too heavy. It should be possible to regulate the amount of thyroid administered so that he remains permanently at about the mean weight for his body length.

It is in the hopes that this relationship may prove of value in other types of case that these curves are published.

E. P. POULTON.

The Duties of a Regimental M.O. on Service.

I HAVE been asked to write something for the GAZETTE on the duties of an R.M.O. on service. Well, the best I can do is to give you my own impressions from a year's experience, but I do not hold myself responsible in any way for anything but a few suggestions which might help M.O.'s who suddenly find themselves with a regiment soon after joining the R.A.M.C.

First of all there are the duties of an R.M.O. as laid down by military regulations, viz., being responsible to the Commanding Officer (i.) for the health of; (ii.) the sanitation of—the regiment. In both these matters he has a free hand. In the latter case, however, the Commanding Officer is responsible for his battalion's sanitation. It is well to know these two points, as I have often known M.O.'s to have trouble over the question of responsibility. With regard to the sickness of the battalion, it is the M.O.'s job to keep as many men in the field as is possible as long as they are capable of doing their duty. A sick man should be evacuated at once, but men must be encouraged to do their duty as long as they can, as undue leniency will increase the sick parade. The question each time to be decided is, "can this man carry on or not?"

The next important question is whom in the battalion he *must* get to know. The M.O. lives at battalion headquarters, and so he will be constantly with the C.O., Adjutant, Quartermaster, Transport Officer, and Second-in-Command. It is very important to get on well with the C.O., as then he will always listen to suggestions of the M.O. and act upon them. However, the C.O. has the whole responsibility of the battalion on his shoulders, and so for smaller matters it is best to deal with the Adjutant, and it is a great asset if you can work

in with him. The Quartermaster is another man whom it is very important to get on well with, as he can be a great assistance to the M.O. All questions of clothing, food, etc., are in his hands, and often he will help you to get various necessary articles. He is responsible for the tidiness of the camp, and I usually make a point of going round the camp with him and seeing to the sanitation at the same time. The Transport Officer will help you in his own department.

An R.M.O. has three squads under him. He has a medical corporal and an orderly who look after the stores and medical inspection room and help with the dressings, and 16 stretcher bearers. I always have a corporal as well, who lives with my medical orderly. He usually is the battalion gas corporal, and so is usefully employed. I make the stretcher bearers live with their companies—four per company, with two stretchers—and I always give them a pack full of shell dressings and iodine ampoules. When we are out of the line I give them a few lectures on first aid. For the duty of stretcher bearer, in my opinion, strength is the great thing; intelligence a long way second. However, a man with both qualities is to be preferred, and I find now the company officers are beginning to realise this, and will select good men for their stretcher bearers. In the bad weather carrying men from the front line to the first aid post is a very fatiguing undertaking; only strong men can do it.

The sanitary squad of 10 men and a sergeant are under the orders of the M.O.. If the sergeant is a good man, the M.O. need not do more than superintend the sanitation, but I find that unless you are constantly keeping them up to scratch, sanitation will be neglected and trouble ensue. There are so many forms of incinerators, grease pits, etc., shown in the books that one gets quite confused, but as long as you know one pattern for each, you will be alright. The Divisional Sanitary Officer and his squad are useful people to know, as they will always help you with advice and material, and if the officer finds you keen on your sanitation he will look after you all the better.

There is also the water squad: 1 corporal and 2 men. These men must be doing nothing else but looking after the water and the watercart, and if you find the Quartermaster or anyone else is using them for fatigues, this should at once be reported and put right. These men should know all there is to know about their duty and the methods of purification. I have handed over my portable box water tester to the corporal to learn to use, and, of course, if he finds any fault I do a confirmatory test. You must see that they keep their cart clean. If you want any odd jobs or fatigues done, the best plan is to see the regimental sergeant-major and get him to detail you a party; it is not necessary to worry anybody else.

It is very important to keep in touch with your Field Ambulance and to know the officers, also their quartermaster, who will supply you with comforts—cocoa, milk, Oxo, brandy, etc. I always have a good supply of these things with me, especially while in the line, where wounded men are often suffering more from cold and exposure than from their actual wounds. It is a good plan to keep a reserve supply of blankets in your aid post in the line for the same purpose and arrange with the ambulance to return them as soon as they can, and then to hand these over as trench stores to the relieving unit and get them to sign a receipt for them, as otherwise they will disappear. I found this happened with three hot-water bottles I brought up and handed over after great trouble in getting them out of the ambulance!

Often when taking over a new line you find yourself without accommodation for stretcher cases at all, and then it is up to you to get a fatigue party and build some sort of sandbag

dug-out. If you can, get the R.E. or miners to help you, but the more open the warfare becomes the less cover and accommodation you will get, and it is then the business of the M.O. to look about for a suitable place and suitable articles to utilise. There are often a lot of salvaged stores lying about, and some of these things are very useful.

When you are out of the line for a short period, the question of inoculation always crops up, and each time you should look at your battalion rolls and find how many men are due. I leave this to my corporal who gets the figures from the orderly room. Again, as to the question of baths, nearly all billetting areas have baths, and it is a good plan to remind your brigade a few days beforehand about getting baths for the battalion the day after they get into billets. When back you should have a waist strip inspection of the battalion and look out for any infectious rash, especially for scabies and the condition of the men with regard to lice. I found that our battalion was getting a lot of P.O.U.O. (pyrexia of unknown origin), presumably trench fever, and I found the men were very lousy. So we issued four flatirons per company and got the men to iron the seams of their clothes fairly regularly with very good results.

If your regiment has been in action you will find that your 16 stretcher bearers are insufficient, and you will have to ask for several squads from the field ambulance to go up at night and help clear the ground. Undoubtedly the place for the M.O. is in the safest dug-out he can find that will serve for an aid post. However, it may be that an officer will have to go up with the bearers if they are to be relied upon to do their work, and then it is for the R.M.O. to decide whether to go up or not. If you do not think the R.A.M.C. bearers will be sufficient to clear the forward area, a good plan is to try to get from your brigade 100 or 200 men of a reserve company or battalion to come up as stretcher bearers and clear the wounded.

In the wet weather the question of trench feet is the great worry of the R.M.O. I usually give companies a lecture on the subject when back, and see all company commanders before going into wet trenches, and try to impress upon them the value of the prophylactic measures such as the looseness of putties, the importance of each man carrying a clean pair of socks with him, pro's and con's of gum boots, and the value of whale oil or the new talc and camphor powder. The latter is now being used following the example of the French, but what the results will be I do not like to prophesy. I can hardly believe that the condition of the feet is entirely due to a fungus and not to the cold and impairment of the circulation. I now leave my chiropodist corporal back in camp to see that every man in the battalion is issued with clean socks and rubs his feet and puts on the prescribed powder before turning in. I think this is a good plan, as the battalion arrives in billets very tired after a tour in the trenches and a long march back, and unless they are supervised by somebody who is fresh they will turn in and sleep without worrying about their feet, with the result that you will get a large number of men down with trench feet the next day.

Every effort should be made to see that the men have hot food in the trenches, and if braziers and coke are not available, then solidified alcohol, Tommy's cookers, etc., should be carried up. Especially in this question is the co-operation of the Quartermaster useful, as he will do his best to procure the articles if you explain to him the value of them to the troops.

The R.M.O. is usually looked upon as knowing all about such things as gas, but now more men are being trained at the schools, he does not now have to do so much, as, unless each small unit knows what to do, it is useless to

expect one man at headquarters to give orders if a cloud does come over. However, I have usually supervised the arrangements in our battalion, but the battalion gas corporal should really do this. N. H. W. S.

Rough Notes on Anæsthetics.

In September, 1916, I wrote under the above heading. Some interest was excited and I hope for more still now. These "ruffians" are not written for tutors, but for the far more interesting stage of sub-tutelage.

The quantity.—A good deal may be needed to get cases well under, even in children, especially those in their teens; but with children particularly very little or almost none is needed towards the end of an operation. It is well to learn when to give enough and when to give very little or practically none at all.

The pupil is not so much of a guide in children, for it is apt to be dilated all the time of an operation. One great anæsthetist tells me that he never looks at the pupil. When an operation so interferes with the anæsthetist seeing the pupils at all, it is found that you can, if compelled, rely on the breathing and pulse alone with satisfactory results.

The hands.—It is a good plan methodically to look at the hands as well as feel the radials during the operation, especially with children. Though the temporal artery, so near to you, may be beating quite merrily, you may find the hands blue, with the radials hardly perceptible to touch. Stopping the anæsthetic and warming the cold hands (without disturbing the operation) will soon make the radials merry again. The hands are usually out of sight, but should not be out of mind. It is difficult to gauge beforehand the strength of a child's circulation.

Dyspnœa of a mysterious kind I once experienced and have heard other similar cases related—cyanosis, awkward hawking and coughing—why? Well! the rubber covering to one of the fangs of a Doyen or Mason gag has, unnoticed, slipped off. Lo! up there comes from the rima glottidis floating on to the tip of the tongue the cause of all the trouble.

The surgeon has sometimes got a way of interfering and he will say, *e.g.*, "Do not give any more." If you follow his advice you may find that the patient either moves or shows signs of shock when he is putting in his final sutures. It is better to swallow such advice and go on doing as you know best. Or again, the surgeon may suggest that the patient is not breathing while in reality the breathing is very light purposely because you know the operation is drawing to a close and you have so wisely arranged as to give no more anæsthetic than is necessary.

On the other hand it may be well sometimes to make it known that the patient is fully under; yet there are signs of shock which may be due to too long or too rough handling of the intestines, etc.

But most pleasant of all are material tokens of encouragement between operator and anæsthetist. A. WITHERS GREEN.

Wardrobe Place, E.C.
Jan. 29th, 1917.

Roll of Honour.

Died on Service.

Temporary Surgeon Charles Edward Reckitt, R.N.

Publications received.

The Nursing Times, The Hospital, The Samaritan Magazine, The Polyclinic, The Manchester University Magazine. Dreams: What they are and what they mean. By J. W. Wickwar. Published by A. & F. Denny, London. Price 1s.

A Case of Hydrocephalus in which the Heart ceased to beat five hours after Respiration had stopped.

VIOLET W., æt. 18 years, was admitted to Miriam ward, under Dr. Fawcett, on January 13th, 1917, for "pain in the back of the head and neck." The family history was good. At the age of 12 the patient had acute rheumatism. A year before admission she was in Miriam ward with cerebro-spinal meningitis, and was transferred to the South Eastern Fever Hospital. After her discharge from that hospital she still suffered from headache and pain in the back of the neck, and was unable to flex her head sufficiently to make her chin touch her chest. In June, 1916, on the advice of her doctor, she went away into the country for two months, and while away was free from pain and declared herself much better, but on returning to London in August the pains commenced again and remained with her, becoming gradually more severe until the date of her admission.

On admission, the patient was a well-developed girl who complained of pain in the head, particularly in the frontal region. The neck was rigid, and the patient complained of severe pain on an attempt being made to flex the head; the chin could not be got within five inches of the chest wall. The sixth cervical to the fifth dorsal vertebral spines were all tender on percussion. *The patient stated that they were all equally tender.* She did not object to the head being pushed sharply down on to the vertebral column, No abnormalities could be discovered in the respiratory, circulatory, alimentary and genito-urinary systems. The pupils were equal, and reacted to light and accommodation there was no nystagmus; the optic discs were normal. The abdominal reflexes and arm-jerks were present and equal; the arm-jerks were very brisk. Kernig's sign was negative. The knee-jerks were very brisk and equal and could be elicited on striking the middle of the subcutaneous surfaces of the tibia: the plantar reflex was flexor on both sides, but rather indefinite on the left side: there was no ankle clonus. There were three *pigmented scars on the right leg above the ankle.* A Wassermann was performed and a negative result obtained.

A lumbar puncture was performed on the day after admission. The fluid was not under pressure, and proved to be normal to microscopical and bacteriological examination. X-rays of the upper part of the vertebral column showed no abnormality. In many ways the patient's disease seemed to be partially functional. At night she would cry out frequently of the pain in her head and quiver violently, so that the bed shook; during the day, when the ward was not so quiet, she was much quieter. One night, a few days after admission, she got out of bed six times, and was on each occasion put back by the night nurse; she got out a seventh time and the nurse took no notice of her, so she walked a little way and then called the nurse's attention to her, but on the nurse refusing to come to her, she returned to bed of her own accord and remained there. Under bromide and valerian some improvement seemed to occur and she was quieter at nights.

On January 28th, at 6.45 p.m., she suddenly gave a cry and became unconscious; half-an-hour later respiration ceased. Artificial respiration was commenced; the pulse was good, the rate 128, and the apex beat forcible. The pupils were widely dilated and did not react to light; all reflexes were absent and the muscles were completely flaccid. Artificial respiration was continued for three hours; the pulse remained strong and regular; there was no cyanosis. Various expedients were tried to induce respiration to recommence, but all were unsuccessful. Lumbar puncture was performed; about 3 c.c. were extracted; the fluid was not under tension. Artificial respiration was stopped for five minutes; the patient did not breathe, but there was no cyanosis and the pulse was unaltered. Artificial respiration was resumed till 11.30 p.m., when cyanosis appeared for the first time; there seemed to be some laryngeal obstruction, so tracheotomy was performed. The pulse, which had been failing, improved, and the general condition seemed a trifle better. An attempt was made to stimulate the respiration by Faradism, but was unsuccessful. About 12.30 a.m, the pulse again began to fail, the heart beats became gradually more irregular, and finally ceased at 12.40 a.m.

At the post-mortem examination no abnormality of the contents of the thorax and abdomen was detected, save marked congestion of the lungs and intense cyanosis of the viscera, particularly liver, kidneys and spleen. There was a large thymus gland; there was no vertebral caries. On removal of the brain from the skull some excess of clear cerebro-spinal fluid escaped. The brain was firm and of normal consistency. The ventricles were all dilated; the lateral ventricles but slightly, the third ventricle more so, the iter and fourth ventricle to two or three times the normal size. There was definite thickening of the pia mater on the medulla, and the lateral ventricle contained excess of fluid. The central canal of the spinal cord was also dilated for a considerable distance downwards.

The interesting features of the case were (1) the length of time the heart continued to beat after respiration had failed, and (2) the remarkable absence of lividity for four hours, even though artificial respiration was stopped at one period for five minutes.

In conclusion I wish to express my thanks to Dr. Fawcett for permission to publish this case. L. S. G.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette," Guy's Hospital, London, S.E.*

A Case of Intraperitoneal Rupture of the Bladder.

Statistics show that intraperitoneal rupture of the bladder is more common in men than in women, and nearly 90 per cent. of recorded cases occurred in adult males.

The operation for the relief of intraperitoneal rupture necessarily has a high mortality. Dambrin and Papin put it at 43·5 per cent. in seventy-eight cases, but early operative interference and improvements in technique have in recent years reduced it to 20·5 per cent.

Death is due to peritonitis, shock, or hæmorrhage. The earlier the operation the better the prognosis. Of thirteen cases observed by Zuckerkandl, operated upon in the first twelve hours, eight recovered, but in twenty-one cases after twelve hours there were only six recoveries.

The case here recorded presents several features of interest. First, the age and type of the subject, together with the associated difficulties to be contended with. Secondly, the operation, which, in itself unorthodox, was performed fully twenty-fours hours after the accident. Thirdly, it demonstrates the ease with which a rupture of the viscus may be produced in an individual subject to alcoholic excess, a condition which predisposes alike to the neglect of micturition, over-distension of the bladder, and relaxation of the abdominal muscles, whose protective influence is thereby lost.

On May 5th, 1914, I was asked to see a man, nearly 70 years of age, of pronounced alcoholic tendencies, with arterio-sclerosis and emphysema and weighing 19 st. The story was that at 9 p.m. the previous night he was returning home when he tripped over a stone and fell upon his face. In the early hours of the morning he was seized with intense pain in the abdomen and an urgent desire to pass urine, but repeated attempts to void any were ineffectual.

At 5 a.m. he was seen by his medical attendant; a soft rubber catheter was passed and 4 oz. or 5 oz. of blood-stained urine drawn off. Two hours later it was passed again and a similar quantity of perfectly clear urine obtained.

He was transferred in the sitting position by motor to a nursing home, the operation was performed at 9 p.m., that is, precisely twenty-four hours after the accident. I have mentioned that the patient weighed 19 st., and the picture which he presented upon the operating table filled me with misgivings. The diagnosis was that of rupture of the bladder, and, in view of the fact that the patient was so bad a subject, I decided merely to drain the abdomen thoroughly to relieve the fast spreading peritonitis and tie in a catheter rather than delay by trying to find and suture the collapsed bladder. The abdomen was opened and two very large tubes introduced, one to the left flank, whither the urine was tracking, and one down to the bladder. For some hours both tubes drained well, but latterly all the urine came from the pelvic one, and next to nothing from the catheter.

The patient's general condition improved so much that it was decided to look for the bladder and repair the damage. This was done on the fourth day after the first operation. It was by no means easy, even by the suprapubic route, to effect an entrance into the collapsed and, by this time, retracted bladder in so adipose an individual. When once this was accomplished I was very agreeably surprised to find that the lower end of the pelvic tube had found its way through the small tear at the fundus of the bladder into its interior, thereby affording the most complete drainage possible. This tube was gently withdrawn from the abdominal wound above, and the edges of the tear seized and sutured in the ordinary way. The bladder was temporarily drained by a small suprapubic tube and a Hamilton-Irving's box. In the abdominal wound a short tube was left for forty-eight hours. There was a good deal of sloughing of skin and fat around the tubes, and, as the result of infiltration with urine of the prevesical areolar tissue, a left-sided scrotal abscess and a good deal of œdema of both scrotum and penis developed. These were incised under local anæsthesia. The patient left the nursing home on June 16th, and I have since heard that his progress is satisfactory.

The signs of intraperitoneal laceration of the bladder are in nearly all cases immediately manifested, but here, as in rare instances, the patient passed a few hours after the accident in comparative freedom from urgent symptoms. The explanation of this, of course, lies in the fact that he was probably too anæsthetically intoxicated to be conscious of his condition.

In the treatment of intraperitoneal rupture the adequate drainage of the peritoneum is obviously of prime importance, but the orthodox method of combining this with the second stage of the operation, viz., the discovery and accurate suture of the laceration, would have occupied time, the expenditure of which, in such a sub-

ject, would have been only to court disaster. Even so, during the shorter operation the continuous administration of oxygen throughout the latter period of the anæsthesia became imperative.

Yet again it may be urged that at the second operation the suprapubic wound might have been completely closed and a catheter tied in, or catheterisation every six hours resorted to. It was found, however, after the preliminary operation, that the patient was particularly intolerant of the presence of the instrument. There was, in addition, some prostatic enlargement, and the bladder itself, friable with fatty infiltration of its walls, demanded very free drainage for the conservation of the intraperitoneal closure. With due regard to the varied complications, I am still inclined to the view that, on the whole, the plan of procedure ultimately adopted was the best.

This case establishes a very important alternative to full and immediate closure, and also the value of suprapubic drainage of the bladder as part of the second stage.

In November, 1916, the bladder functions were quite normal, and the patient was drinking again.

Dr. J. C. Muir has, since the publication of this case, recorded from the West Ham Union Infirmary one of a somewhat similar nature, affording additional evidence of the value of temporary trans-peritoneal drainage. The following are the brief notes of his case :—

The patient had unfortunately suffered from the condition for three or four days before entering the infirmary, having apparently been drinking, having himself no knowledge of any injury, and having only complained vaguely of abdominal pain. His condition was, as might be expected, desperate, and no operative procedure of any length could possibly have resulted in anything but his death. I found that the tear was entirely intraperitoneal and just big enough to take a large drainage tube. I hastily put one in and another into the pelvis and did nothing more. He died of exhaustion after five or six days, having survived quite long enough to show that as far as the local condition was concerned the method was satisfactory for a desperate case of that sort. He had no abdominal pain after operation and the abdomen was soft and free from tenderness. There was, of course, considerable sepsis, with sloughing of the edges of the wound.

NORMAN FLOWER,
M.A., M.B., B.Ch.,
Assistant Surgeon, Yeovil Hospital.

Consulting Engineer's Report for the Year 1916.

The Treasurer,
Guy's Hospital,
London, S.E.

MY LORD,—I beg to enclose my Report with Statement of Accounts for the Central Station for the year ending November 30th, 1916.

The outstanding feature of these accounts is the cost for coal used during the year, the amount expended being £10,728 as against £6,966 last year, and £5,206 during the year ending November 30th, 1914.

The following statement shows the amount used in the Hospital, the cost, and the average price per ton—

Year.	Amount in Tons.	Cost £	s.	d.	Average Price per Ton.	Remarks.
1910	4,437	3,665	7	10	16/6.2	
1911	4,456	3,694	4	2	16/7	
1912	4,641	4,217	3	9	18/2	Coal and Transport Workers' Strike.
1913	4,984	4,993	14	3	20/0.4	Coal dearer as result of strikes.
1914	5,114	5,206	8	5	20/4.3	War declared on August 4th.
1915	5,445	6,966	19	5	25/7	War.
1916	5,892	10,728	4	7	36/5	War.

Attached to the end of the report is a graphic representation of the actual price per ton delivered at the Hospital month by month since the commencement of the War in August, 1914, up to the end of our financial year on November 30th, 1916.

The lower graph shows the cost of freight in August, 1914, as also its cost since November, 1915, when the contractors refused to quote an inclusive price owing to the uncertainties of freightage.

From these tables it is evident that the large extra cost this year is chiefly due to the rise in prices caused by the War.

As a continuous supply of suitable coal is essential to the various activities of the Hospital, this has always to be the first consideration, and I am glad to report that our coal contractors, Messrs. Charrington, Sells, Dale & Co., have kept us satisfactorily supplied during the year, largely owing to their facilities for supplying sea-borne coal.

In October, 1915, the contractors gave us notice that they could no longer quote delivered prices including freight, and after that date they would only be able to quote for the cost of the coal delivered plus the actual cost for the freight charges as paid by them.

As the resulting increase in cost was great, I was instructed by the Committee to ascertain if we could obtain a suitable coal to be delivered by rail instead of by sea so as to reduce the cost.

The result of my inquiries was that neither Messrs. Charrington nor any other of the contractors I approached could or would undertake to give a continuous supply by rail owing to the large demands on the colleries and to the congested state of the railways.

During the past year I have made further inquiries, but although I have approached a large number of reliable firms, including those whose names were given to me by the Committee, I have in no case been able to obtain a firm offer from any of them for a continuous supply of suitable coal for our purposes, and

I fear that the conditions will not improve until the end of the war and that this large additional expense must be faced.

Store of Coal.

During the year I was instructed by the Committee to consider, in consultation with the Architect, the possibility of arranging a coal store in the Hospital grounds, and a scheme was prepared, but, owing to its cost, was abandoned.

The President of the Hospital then suggested that he might be able to obtain a site for a store at Bricklayers Arms Station, and owing to his help and the courteous assistance of the General Manager of the South Eastern and Chatham Railway Co. and his officers, a site was obtained at a nominal rent of 1s. a year.

The Committee instructed me to store about 600 tons of coal on this site (500 tons of Ackton Hall nuts and 100 tons of larger coal to enable the small coal to be stacked), and this has now been delivered, the actual quantity stacked being 594 tons 10 cwts.

As the time for delivery in this case was not of first importance, I was able to arrange for the coal to be sent by rail, which has reduced the cost, so that, including all charges, such as wagon hire, stacking on site, etc., it works out at an average price of about 33s. per ton on the site, and when the cost of carting to the Hospital is added, the actual cost will be almost the same as we now pay under contract.

Engine House Plant.

On July 24th the engine of No. 1 generating set broke down, the piston valves, etc., in one line being shattered.

As I found that the pistons, etc., on the other two lines were considerably worn, I arranged that they should also be renewed.

Spare parts had been on order, as authorised by the Committee, since April, but, owing to the difficulty of obtaining them, we were only able to get the engine running again during December.

It is now in good working order and is working satisfactorily.

One of the vacuum pumps in connection with the heating system has been repaired with new liners and valves as these were worn out.

Two of the vertical feed pumps have been fitted with new buckets.

Generally, the machinery is now in good order.

Boiler House Plant.

The boilers and economisers have been maintained in good condition and have been tested and passed as satisfactory by the Vulcan Boiler Insurance Co.

From the statement given above it will be seen that the quantity of coal used is 447 tons more than was required last year to satisfy the demands of the Hospital.

My reports show that these demands steadily increase, and that the additions in any one year are felt in the succeeding year.

During the year under review additions were made to the service supplies in connection with the extension of the Henrietta Raphael Nurses' Home, to the Massage and Electrical Departments in the Medical Building, and in connection with various smaller alterations.

Maintenance Charges.

Maintenance charges amount to £495 19s. 4d. this year as against £213 15s. 4d. last year owing to the cost of new parts for the engines, the mechanical stokers, and the pump repairs.

Smoke Nuisance.

Owing to further complaints of smoke from the chimney stack, an induced draught fan has been fitted in connection with the boiler flues, by which the draught can be increased or diminished as required.

As stated in my report of November 3rd, 1915, I hoped that if this arrangement were installed it would have enabled us to burn a less smoky coal than Ackton Hall.

Owing to the war, however, we have been unable to obtain supplies of other coals, and I regret that I cannot report that its use with Ackton Hall coal has so far removed the smoke nuisance, although I am still of opinion that with more care on the part of the stokers this difficulty might be overcome, and I am making further endeavours on these lines.

Electric Light and Power.

Summary of Electricity used per annum.

Year.	Units of Electricity used in the Hospital.	Cost per Unit (exclusive of Interest and Depreciation.)
1911	302,450	0.98484d.
1912	313,710	1.01507d.
1913	327,030	1.00526d.
1914	336,889	1.07682d.
1915	337,650	1.11026d.
1916	358,795	1.62167d.

70 additional lights were connected during the year, bringing the total number to about 5,400 in use in the Hospital.

50 additional plugs were connected, making a total of about 1,386.

One additional motor has been connected, namely, that for driving the induced draught apparatus.

About three miles of wiring have been used in connection with extensions and alterations, of which about three-quarters of a mile was lead-covered.

The extra amount of current used in the Hospital during the year is 21,145 Board of Trade units.

The cost per unit has increased from 1·11026d. to 1·62167d., this increase being principally due to the extra cost of coal.

Summary of Electric Lamps issued from Stock and Cost per annum.

Year.	Metallic Filament.	Cost. £	s.	d.	Carbon.	Cost. £	s.	d.	Total Number.	Total Cost per Ann. £	s.	d.
1913	1980	181	10	0	1850	46	5	0	3830	227	15	0
1914	1792	155	13	8	1761	44	0	6	3553	199	14	2
1915	1639	105	18	3	1030	25	15	6	2670	130	13	9
1916	2338	126	12	10	125	4	3	4	2463	130	16	2

It is interesting to note that whereas in 1913 an almost equal number of metallic filament and carbon lamps were in use, in 1916 metallic filament lamps were almost entirely used to the exclusion of carbon lamps, due to our now being able to obtain these at a reasonable price as compared with carbon lamps.

Heating and Hot Water Supplies.

The heating and hot water supplies generally have proved satisfactory.

The additions during the year involved the use of about 2¼ miles of new piping.

Bakery.

The machinery in the bakery has worked satisfactorily.

The following table gives the quantities baked during the years 1915 and 1916 :—

Year.	Bread in Qtns.	Buns, No.	Cake, lbs.
1915 ...	51,116 ...	11,756 ...	152
1916 ...	54,532 ...	12,897 ...	100

Surgical Cutler's Shop.

This department has worked satisfactorily, and the number of instruments dealt with during the year has considerably exceeded 8,000.

Electro Plating.

This department has proved satisfactory, some 850 articles of a most miscellaneous character having been dealt with during the year.

The actual cost incurred for labour and materials was about £58.

Laundry.

The machinery in the laundry has been kept in good repair.

The callender beds have been tested and passed as satisfactory by the Vulcan Boiler Insurance Co.

I am, my Lord,
Yours faithfully,
(Signed) THOS. KIRKLAND.

Pass List.

Royal College of Surgeons of England.

At the First Professional Examination for the Licence in Dental Surgery, held on January 25th and 26th, the following candidates were approved in the undermentioned subject:—

Mechanical Dentistry and Dental Metallurgy.—W. H. Turner.

Mechanical Dentistry.—H. M. Marshall and S. V. White.

At the Preliminary Science Examination the following candidates were successful:—

Chemistry and Physics:—E. C. Keet, G. Levy, P. J. Morrison.

At the Second Professional Examination in Anatomy and Physiology held recently, J. E. Wright, L.D.S. Eng., was successful.

Society of Apothecaries of London.

PRIMARY EXAMINATION. Parts I. & II.

At the Examination, held on the 1st, 3rd, and 4th of January, the following candidates were approved in the undermentioned subjects;—

Anatomy.—L. Burville-Holmes, G. K. Reeves, J. E. Wright.

Physiology.—J. G. Barrie, C. V. Brown, L. Burville-Holmes, E. E. D. Gray, G. K. Reeves, J. E. Wright.

Rugby Football.

A.S.C. GROVE PARK v. UNITED HOSPITALS.

Beaten the Hospitals certainly were at Grove Park on Saturday, January 20th, but very far from disgraced. The team which has gained such notoriety were well held all through the first half of the game, during which time the soldiers got one goal gained by fine passing on the part of Jones, Ware, and Wagstaff, and eventually grounded by Nixon. Gronow did the needful in the way of goaling, but when the Hospitals got their try by means of a forward rush, although the place was easy, Millet failed. Our forwards played well all through the first half, they were the lighter, but that did not prevent them giving the opposing pack plenty to go on with in hard scrummaging and loose footwork. Millett tackled well and kept his line intact, except for the one score mentioned above, until after the interval.

It was bad luck for us that the A.S.C got a try quite early in the second half. Rosenfeld was the scorer, but Wagstaff cleared the way for him. Then Llewellyn almost scored but went to touch by the corner flag. However, our opponents were now getting the ball more to their backs with the result that Wagstaff was constantly on the move, also Jones, and Nixon got in wide out. Gronow failed to goal from Rosenfeld's try, but he kicked a beautiful goal from Wagstaff's effort Jones now got away on his own, it was a long and successful sprint. His try was not added to. But Gronow made ample amends with a magnificent kick from the touch-line following on a try gained by Ware. Gronow was the last try getter, and as this was not converted the A.S.C. finished with 3 goals 3 tries (24 points) to 1 try (3 points).

With a little more practise together the Hospitals can do better, more especially if the centres will remember the men on the wings are there for a purpose. Stewart is one of the fast wingers playing or who has played the game. He should be given every chance. Curle as well suffered from a sort of starvation. The forwards played well, adopting splendid tactics for the occasion. The halves and three-quarters did not quite come up to the same standard probably owing to not having played together before. Millett at full back was quite good.

H. Millett (Guy's), (back); W. A. Stewart (London), P. A. Smuts (Bart.'s), (back); E. E. Lewellyn (Bart.'s), C. L. Curle (Guy's), (three-quarters); C. R. Cowie (Middlesex), P. R. Bishop (Thomas's), (halves); S. A. T. Ware (Thomas's), H. M. Edwards (Thomas's), J. Nichol (Middlesex), F. W. Reitz (Guy's), C. W. W. Armstrong (Guy's), F. Mosely (London), N. de Kock (London), H. C. C. Joyce (Bart.'s), (forwards).

Births.

CARRUTHERS.—On January 27th, at Oakley House, Acle, Norfolk, to W. Stuart Carruthers, M.R.C.S., L.R.C.P., and Mrs. Carruthers (*née* Forbes), twin sons, one survives.

KNOTT.—To the wife of Frank A. Knott, on Jan. 31st, at 13, Leonard Place, Kensington—a daughter.

SMALLEY.—On the 13th December, at Kowloon, Hong Kong, the wife of James Thornton Smalley, M.R.C.S., L.R.C.P. (Lond.), of a daughter.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

SINCE the publication of the manifesto of the Food Controller on February 1st, most men and women in this country have been considering whether their food consumption is in excess of his recommendations, and if so, how they are to cut it down to the required standard. The question is one which is bound to have a personal interest for every intelligent individual, for unless there is a voluntary curtailment of its consumption of certain foods by the nation as a whole, Lord Devonport and his colleagues threaten the institution of a system of food tickets, a step which would be bound to lead to a great deal of personal annoyance and inconvenience.

The problem as it affects those who are in residence at the Hospital, whether students or nurses, is not quite so simple as it would appear at first sight. The quantities of the main foodstuffs recommended as adequate by the Food Controller are for each head of the population per week, including children. At Guy's, if we omit the patients in the hospital from our calculations, we are all adults, and, therefore, we are entitled to considerably more food than the amounts specified.

It has been estimated by a Committee of the Royal Society, in a Report on the Food Supply of the United Kingdom, taking into consideration the relative numbers of men, women and children, that 100 men, women and children are equal to 77 adult units or "men." Consequently for individual adult males Lord Devonport's figures must be increased to an allowance of 4 lbs. of flour, $3\frac{1}{3}$ lbs. of meat, and 1 lb. of sugar per week, if they are to get their fair share of the total food available for the nation. For adult females the allowance should be four-fifths of the above figures.

The obvious moral of this is that the residents, students, and nursing staff of the Hospital are entitled to a larger quantity of the specified foods than those laid down by the Food Controller, and, therefore, those who attempt to limit themselves strictly to his figures are doing themselves an injustice. As long as they do not exceed the figures we have given above, they cannot be accused of a lack of patriotism. Moreover, the great majority of those who live in the Hospital, especially the nursing staff, lead a strenuous life, with long hours, exposed constantly to every kind of infection; if they are to be able to continue their work without danger to their health and a diminution in their efficiency, it is essential that they should have

the full allowance of food to which they are entitled. Any attempt, therefore, to bring the average consumption of food per head in the College or the Nurses' Home down to the official standard of 3 lbs. of flour, $2\frac{1}{2}$ lbs. of meat, and $\frac{3}{4}$ lb. of sugar is not justified by motives of patriotism and is likely to be deleterious to the health of the victims.

There is, however, one way in which something may be done to compensate for a diminished food supply. In every establishment where a large number of people feed together it is unfortunately only too common to find that a very high percentage of the value of the food used is wasted through bad cooking and the unpalatable way in which it is served up. This is specially true in the case of those who work in the Hospital. Their work is not the healthy muscular work which brings a good appetite, and though they need food to maintain their health and strength, it must be offered them in a palatable, perhaps almost tempting form. If it arrives half cold and badly cooked, what appetite was originally present becomes suppressed, and what might have been an adequate meal remains half eaten or perhaps untouched. Moreover, it is well known that in time the body will accommodate itself to a lowered diet with a decreased metabolism, and that this involves a diminished efficiency and an increased liability to disease. For those of us whose work is strenuous and who live in the midst of disease it is, therefore, essential to keep up our metabolism, and this can only be attained by an adequate diet. It is to be hoped, therefore, that those who have in their charge the provision and the preparation of our food will aim not so much at cutting down its amount as at making the best use of what is provided, and this they can only do by ensuring that it is served in the most agreeable and palatable form possible.

THE work of the Genito-Urinary and Skin Clinics recently established under the auspices of the Local Government Board and the London County Council has been somewhat upset owing to Mr. L. S. Gathergood having been called up for service in the R.A.M.C., while Mr. Genge-Andrews unfortunately is temporarily incapacitated by illness. It was originally suggested that an appointment in these Departments would carry with it partial exemption in view of the national importance of securing adequate treatment for venereal disease. We venture to think that Government Departments are too subservient to the Military Authorities and that the Local Government Board might make more efforts to prevent the depletion of the specially skilled staff of medical men who are working under their scheme to combat venereal disease. Arrangements have been made to carry on the clinics until Mr. Genge-Andrews is well enough to return to his work, which we hope will be at no very distant date.

WE publish in another column an appreciation of the work done by Miss L. V. Haughton both for the Hospital and for Nursing. Her duties as Matron have been taken up by Miss Margaret Hogg, the late Assistant Matron, who, we feel sure, will continue to maintain the high traditions of nursing at Guy's.

IN a recent number of the *British Medical Journal* some interesting statistics are given of the casualties and honours during 1916 among the medical services both naval and military. It appears that 33 medical men have been killed in the navy compared with 129 deaths in the land services. The exact number of qualified men serving in the navy and army is not

known, but from the figures given above it might be surmised that the percentage mortality in the naval service is at least as high as in the army.

The number of officers holding temporary rank in the R.A.M.C. who have been killed or who have died on service is 114, whereas in the regular R.A.M.C. the number is only 9. With regard to the number of honours bestowed, the difference between the two branches of the service is not so remarkable. Among the regular R.A.M.C. there were 163, while the temporary R.A.M.C. claim 248. Of four medical officers who were awarded the Victoria Cross, three were Territorials.

Since the beginning of the war the rise in wages and cost of materials has increased the expense of producing the Gazette by about one-third. This increase has been felt by all periodicals, and the *Lancet* has been compelled to raise its price from 6d. to 8d. a copy. Also the difficulty of obtaining a sufficient supply of paper is one which is likely to become more acute as long as the war lasts. We are glad to hear that our printers have sufficient stocks in hand to supply the Gazette for at least six months.

The President and Governors of the Hospital have advanced £1,000 for the purchase of War Savings Certificates for the benefit of the Guy's Hospital War Savings Association. In this way the country has had the immediate use of the money, which was paid direct into the War Loan, and the Association has 1,300 Certificates dated February 12th, of which doubtless before this number is exhausted many will be "pre-dated" by many months, thus affording a higher rate of interest to the subscriber.

Louisa Victoria Haughton.

Matron of Guy's Hospital, September, 1909, to February, 1917.

All past and present workers at Guy's Hospital since December, 1896, whether in the nursing or medical service, heard with great sorrow of the grave illness of Miss Haughton in November last year. It is a matter of deep thankfulness to her many friends that she has recovered to a most wonderful extent, and is now at Eastbourne where much benefit may be expected from the healing effects of sea and air.

After some further time of change and rest with relatives and friends in Ireland and elsewhere, the pleasure is in store of seeing Miss Haughton re-established in London in touch with the work to which she had dedicated her life and energies and prepared to again devote her powers and experience to its service.

That her serious illness has necessitated her resignation of the matronship of the hospital is, indeed, a tragedy and a grief beyond expression. On Friday, February 2nd, this was accepted with profound regret by the Court of Committees. The President and Treasurer of the Hospital, the House Committee, and members of the Medical and Surgical Staff who have been individually associated with Miss Haughton in her administrative work, have personally testified to their appreciation of her service and their distress at its untimely and unforseen termination. If our sense of loss is great, so is her sorrow in giving up the work she loved. May that sorrow be assuaged by opportunities of usefulness in days to come.

Miss Haughton entered Guy's as a probationer in December, 1896. She won the Cazenove Gold Medal in 1897 for the highest number of marks obtained in the medical, surgical and nursing examinations of that year. In Janu-

ary, 1900, she was appointed Sister of Patience Ward, and afterwards Sister Astley-Cooper.

In 1902 she left London to return to Ireland, her native land, and for seven years acted as Lady Superintendent of Sir Patrick Dun's Hospital, Dublin. There are many Irish nurses who can bear witness to the efficiency of Miss Haughton's training; she has always retained a deep interest in the Hospital and their work and kept in touch with those who took up District Nursing on the West Coast. On more than one occasion she spent her holidays with some of these lonely workers and had fully intended to follow the same vocation had not the claims of administrative posts decreed otherwise.

In September, 1909, Miss Haughton was invited to return to her former training school as Matron, and for more than seven years she devoted herself to the work involved by such a position. The daily duties are multitudinous, with many difficulties to adjust, a standard of high expectation and efficiency to be raised and maintained, the health, welfare and training of a large nursing staff to be controlled, and their joys, sorrows and interests met with insight and sympathy by "a heart at leisure from itself." A big hospital, constantly adding to its departments, means corresponding additions to the matron's responsibilities, and Guy's of today can bear witness to growth of Miss Haughton's work within its walls.

In the outside world many movements for the development of women's education and opportunities claimed her adherence, including that of the common cause of humanity—the enfranchisement of her sex, and in pre-war days the Tabard Branch of the London Society for Women's Suffrage held its meetings in the Nurses' Home.

At the same time, mention must also be made of her connection with the newly established College of Nursing. Miss Haughton had long been convinced of the value of State Registration, and was one of the representatives of the Irish Nurses' Association on the Central Committee for State Registration and also President of the London Branch of the National Union of Trained Nurses.

Realising that the movement, under the leadership of the Hon. Arthur Stanley, for the legal registration of nurses and the organisation of the profession, was both extremely opportune and entirely admirable, she worked indefatigably upon the council of the College. Guy's has reason to be proud of the part that Miss Haughton and Sir Cooper Perry, as Hon. Secretary to the College of Nursing, have played in giving their time and talents to this long awaited reform.

As a member, in times of peace, of the Nursing Board of Queen Alexandra's Imperial Military Nursing Service, Miss Haughton was well prepared upon the outbreak of war to meet the tremendous demands made upon all connected with the nursing profession, and the Nursing Board at Whitehall has very greatly valued her advice and experience in the formation of the Civil Hospital Reserve of the Q.A.I.M.N.S.

In spite of the difficulties the war has caused in the administration of the Civil Hospitals, Miss Haughton devoted herself to the assistance of all wishing to take up military nursing. There are now 390 sisters and nurses trained at Guy's Hospital at work in military hospitals at home and abroad, on trains, ships and barges. An untold amount of intense personal feeling was entailed by this work, performed by one who felt the honour of the nurses' opportunity, the risks to their health, and the searching tests that strange conditions and surroundings would apply to character and efficiency.

The Officers' Section has also called for a like expenditure of personal interest. Opened

in November, 1914, 823 patients have to date passed through the ward, many of them long and serious cases. To these men and their friends, Miss Haughton responded readily to their claims for true sympathetic consideration.

This is but a brief account of services faithfully rendered, the offerings of a free spirit, and each one must read into it the true meaning of their far reaching activities.

". . . . . Nothing but well and fair,
And what may quiet us in a life so noble."

All who have had the honour and privilege of working with Miss Haughton while nurse, sister or matron, will enshrine in their lives, as a joy and great encouragement to good, the thought of that "shining self" of gentle dignity and steadfast will, delighting in the humour and comedy of daily life and bearing a most understanding heart.

The Matronship & Assistant Matronship of Guy's Hospital.

Miss Margaret Hogg has been appointed the Matron of Guy's Hospital, where she was trained, under Miss Swift, from 1905—1908. On obtaining her certificate she joined the private Nursing Staff at Guy's Institution and worked there nearly two years. She is a certified midwife and certificated masseuse I.S.T.M.

She then became first surgical and then medical night sister at Guy's Hospital. In 1911 Miss Hogg was appointed Sister to Queen Victoria Ward and in March, 1914, Assistant Matron at Guy's Hospital. The fact that Miss Hogg has worked continuously at Guy's, where the authorities have had full opportunity to appreciate the value of her professional progress and administrative gifts, may be taken as conclusive evidence that she is a woman of exceptional energy and capacity and holds admirable qualifications for the position. Since Miss Haughton's illness she has been Acting Matron.

The difficulties of a matron's post at the present time are many. Sisters and nurses are naturally anxious to enter war nursing service, the domestic staff are tempted away by offers of more highly paid work and the price of food and stores, and the impossibility of obtaining many necessary articles are a few of the many daily problems to be solved.

We are sure that Miss Hogg will find wide scope and great pleasure in work that is so splendidly worth while, and all at Guy's will offer her their best wishes and whole-hearted co-operation and thus enable her to fill her honourable position with success and distinction.

Miss Agnes Coulton has been appointed Assistant Matron. Before coming to Guy's Hospital she had three years' training in a Children's Hospital, and also acted as Staff Nurse and Sister. After obtaining her Guy's certificate, she filled the posts of Sister of Patience Ward, Night Sister, and from 1913 to 1916 Sister of the Out-Patient Department.

Since Miss Haughton's illness she has been assisting Miss Hogg, and her many friends at Guy's are delighted to hear of her appointment and wish for her also a successful career, and much happiness in fulfilling its duties.

Honours.

D S.O.

Lieut.-Col. H. A. Moffatt, S. African Medical Corps.

Military Cross.

Capt. R. S. Kennedy, I.M.S.

Mentioned in Despatches.

Capt. (Temp. Major) A. D. J. B. Williams.

Obituary.

Surgeon Charles Edward Reckitt, R.N.

Surgeon Charles E. Reckitt, who died on January 20th as a result of illness contracted on active service, was 30 years of age, and the elder son of Lieut.-Col. J. D. T. Reckitt, R.A.M.C. He was educated at Bedford Grammar School and Berkhamstead School, entering Guy's in October, 1905. He qualified in 1913, and was Assistant House-Surgeon at Guy's, and subsequently he held the post of Ophthalmic House-Surgeon at the Hull Royal Infirmary.

In April, 1915, he joined the navy and was senior surgeon on H.M.S. *Shannon*. In December, 1916, he developed cellulitis of the forehead. After several operations, osteomyelitis of the frontal bone was followed by a subdural abscess, of which he died in Haslar Hospital.

He was a well known and popular figure at the Hospital for many years, and we cannot do better than quote an appreciation of him sent by one who was for six months his House-Surgeon when Reckitt was dresser to Mr. Philip Turner and Sir Alfred Fripp. He writes as follows :—

"I first came across him in the Swimming Bath where I was struck by his neat, well-knit figure and his good diving, which won so many prizes at the Guy's water sports.

Later on he was a dresser to Mr. Philip Turner, when I was his A. H.-S., afterwards on Sir Alfred Fripp's firm when I was H.-S. To all of us he was always "Charles," no surname seemed to be necessary, for he was the life and soul of any firm he was on. Quick and alert, merry and jovial through the longest night's work of a heavy "take-in," he seemed tireless and full of energy in the small hours when no one is supposed to be a hero.

His alacrity to carry out orders, without delay or question, showed clearly the discipline that becomes second nature to a soldier's son.

With his patients he was painstaking and careful, but he added to his treatment a kindly word and a most infectious smile that will make him remembered for many a day amongst both Out- and In-Patients at Guy's. A large basket of fish from Southend used to come regularly from a fisherman as a small recognition of "Mr. Rickittses kindness" when he was a patient in Job.

The bibulous bellicose Boroughite on Saturday night in the "Front" who defied alike the O.P.O., the A.H.S., and the other dressers, became calm and reasonable under Charles's jocund austerity; for Charles had an absolute fearlessness combined with tact that made the most hardened ruffian realise that he had someone to reckon with who was a sportsman to the finger tips.

How they must have loved him in the navy. I am certain that many and many a grateful bluejacket would have been proud to have had the chance of carrying him to his last resting place.

A heavy toll has been levied on Guy's in this war, and though Charles Reckitt did not die in action, he was yet a son whom Guy's could ill afford to lose. May he rest in peace, for "to live in the hearts of those we love is not to die."

We publish with this issue a photograph of Charles Reckitt, which will be appreciated by his friends and contemporaries.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette," Guy's Hospital, London, S.E.*

Surgeon CHARLES E. RECKITT, R.N.

(Died on Active Service, January 20th, 1917.)

Supra-Pubic Cystotomy.

CLINICAL LECTURE BY A. R. THOMPSON, F.R.C.S.

GENTLEMEN,—I want to talk to you for a short time to-day on the subject of supra-pubic cystotomy. Any operation for opening the bladder is a cystotomy, and there are several methods in addition to the supra-pubic. There is what one may call the median perineal cystotomy—the old median lithotomy. Then there is lateral perineal cystotomy—the old lateral lithotomy. Then there is Cock's operation, or some modification of it, involving the opening of the bladder for stricture through the perineum. Finally, there is the peritoneal route, which is strongly recommended by a good many authorities, for the purpose of opening the bladder *via* the abdominal cavity, so as to secure better exposure of a growth. The cases which have been published have shown, so far as I know, no untoward results, and certainly, in some cases of growth, the position of which one can identify by means of the cystoscope, such a procedure, deliberately opening the peritoneum over the bladder, is an operation which will find its place in surgery.

With regard especially to supra-pubic cystotomy, I will first describe the normal anatomy of the operation.

It may be done by either a vertical or a transverse incision. Although I have made a transverse incision with the view of opening the bladder, I am not satisfied that it has any particular advantages in itself, and I always practise the vertical incision.

The anatomical marks which are important in connection with supra-pubic cystotomy are the umbilicus and the symphysis pubis, both of which may be, and often are, covered by the towels limiting the field of operation. And it is very important, when these land marks are so covered, to remember and identify the median pigmented central raphe leading from the umbilicus to the pubes. The line above is limited by the exigencies of the operation. If you think you are going to have an operation which will necessitate a big opening, obviously the opening may extend quite, or not quite, as far as the umbilicus. But whatever your upper marks are, I think it is a good thing to make the lower limits come well down below the summit of the symphisis pubis. The skin, superficial fascia, and deep fascia are divided. Remember that the superficial fascia is thicker and more vascular below. The linea alba is then exposed, and this may be quite difficult, if you are not accurately in the middle line, to determine. And the best guide to the middle line is the pyramidalis muscle, the fibres of which pass downwards and outwards from the linea alba to the pubes. You can, therefore, track up these fibres until you get to fibres running downwards and outwards on the opposite side. Between them the linea alba must lie. The linea alba is then incised, and the abdominal fascia, which may not form a very distinct layer, is also incised. You then expose a good deal of fat. You must be very careful about incising this fat. I think the best thing to do is to put an abdominal retractor in and retract the fat upwards as far as possible, aided by the touch of a knife, as near the symphysis pubis as possible. The reason of this precaution is, that in this fat peritoneum may be lying, and if you deliberately incise the fat without thinking of the peritoneum, you may incise peritoneum also. The fat lies in the potential space known as the cave of Retzius, and by removing or retracting the fat upwards by means of the abdominal retractor, you convert that potential cavity into an actual one, at the bottom of which lies the bladder. The bladder can be easily recognised by the large number of veins which lie upon its anterior wall, in ad-

dition to which the muscular structure of the bladder is readily identified. Those veins should, if possible, be avoided by the knife; they are apt to bleed rather profusely if they are cut, and as they run vertically, it is easy enough to avoid them.

The bladder is then ready for incision. But before incising it, its walls should be secured, either by means of silk sutures, or by Lane's forceps. An incision is then made through the bladder wall, and the bladder opened.

The bladder, before the operation, should be dilated, with either air or fluid. Whether you dilate with air or fluid, please remember, whilst the dilatation is proceeding, to keep your hand on the lower part of the abdominal wall, and palpate. Do not be content with merely putting so many ounces of fluid into the bladder; you cannot really determine how full the bladder is unless you palpate it. If air is used for dilating, I strongly recommend, for the incision of the bladder, either a Symes knife, or a very sharp-pointed tenotomy knife. Otherwise, the bladder mucous membrane, which, you will remember, is very loosely attached to the muscular tissue, is very apt to be pushed in front of the knife, and hence difficulty occur in making a complete incision of the bladder wall.

With regard to the peritoneum and its relationship to any bladder incision, you might remember that it comes much lower down, even when the bladder is dilated, than is commonly taught, and there is danger of cutting the peritoneum when you incise the bladder upwards.

Having made the opening into the bladder, one is very tempted to make the opening still larger by cutting upwards and downwards. If you cut upwards, do be careful about the peritoneum.

Supra-pubic cystotomy may be performed for a stone in the bladder, or at the ureteric orifice, for stones may be impacted in that orifice and give rise to all the symptoms of vesical calculus. Such a condition may be identified by the cystoscope before supra-pubic cystotomy is performed, and under those circumstances it is advisable to do supra-pubic cystotomy in a certain number of cases. It may be needed for plastic operations on the ureter in connection with growth, or inflammation, or for congenital trouble. Supra-pubic cystotomy may also be indicated in growth of the bladder, in inflammation of the bladder, in injury of the bladder, and in certain cases of ruptured urethra. It is also done for supra-pubic prostatectomy, or for the exploration of vesical and renal lesions undiscovered by cystoscopic examination, when there may be pyuria, and there may be hæmaturia, and you are handicapped by the impossibility of placing an adequate amount of fluid in the bladder. Sometimes the bladder cannot be dilated even to hold the smallest quantity of fluid, as in cases of ovarian tumour, or pelvic sarcoma.

But supra-pubic cystotomy may also be done for other reasons. It may be performed for the relief of inoperable growth with the formation of a permanent urinary fistula; the inoperable growth, being situated in the bladder or pelvis, produces obstruction to the flow of the urine from the bladder. It may also be done for the treatment of stricture apart from catheterisation. And I would utter a word of warning in connection with the question of supra-pubic cystotomy for the treatment of impassable stricture. At one time, especially if there was any perineal inflammation associated with the stricture, it was the custom to do Cock's operation, which consisted of an incision of the bladder *via* the urethra in the middle line of the perineum. What happened was, that the stricture, being cut, became infected, the infection very quickly spread by the lymphatics *via* the base of the bladder, by means of the lymphatics of the wall of the ureter to the kidney, and a condition of ascending interstitial ne-

phritis was set up, with the inevitable result of death. Where you find a perineal abscess and a stricture, I strongly recommend you to simply incise the abscess, leave the stricture alone, and treat the patient by drainage through a supra-pubic wound. There is then very little risk of infecting the already dilated and injured lymphatics.

Supra-pubic cystotomy may be called upon for the treatment of hæmorrhage of such nature and degree as to cause alarming symptoms, quite apart from the cause of the hæmorrhage, such as occasionally occurs with an enlarged prostate or a growth.

The comparative disadvantages of supra-pubic cystotomy are, that the bladder may be deeply situated, even though more dilated than normal, and if empty, it may be very difficult to find. The peritoneal relations may cause difficulty. And, of course, there are mechanical disadvantages in draining the bladder through a supra-pubic wound.

The comparative advantages of supra-pubic cystotomy are, it is usually not difficult, if precautions are taken, to get a view of the bladder, and this certainly is not possible by the perineal route. Illumination of the bladder is possible by means of the cystoscope, or by means of a small lamp introduced into the bottom of the bladder. The part of the bladder affected can be dealt with by means of special retractors for the purpose of isolating the growth. Ureteric conditions are rendered visible, but to pass ureteric catheters up the ureter through a supra-pubic cystotomy wound is a very difficult procedure indeed, and I do not encourage it being attempted.

Supra-pubic cystotomy is practically the only operation possible on children's bladders. Here I show you a child's bladder which has been filled with plaster. Observe the furrows due to the ureteric ridges; here is a catheter indicating the position of the urethra, and I am holding it by the pelvic brim. Only that part was in the pelvis, the rest of the bladder was in the abdominal cavity. So please remember that in the case of a dilated bladder, in a child, four-fifths of the bladder lies in the abdomen.

Supra-pubic cystotomy may also be undertaken for the purpose of draining the bladder for kidney conditions.

The first case I wish to show you is that of a man who was sent up by Dr. Smith, of Plumstead, J. L., æt. 63. He was admitted for retention. Six weeks before admission he noticed difficulty in passing his water, and had to have a catheter passed for about nine days, after which he began to pass his water again, and had no trouble for about a month. He then had difficulty again, and was admitted to Guy's. On admission, his bladder was found to be up to his umbilicus. A catheter was passed at once, and since then one was passed twice a day. The prostate is enlarged, and projects into the urethra, being easily felt on passing the catheter. He showed distinct symptoms of uræmia, as he was vomiting and was semi-comatose. Dr. Ryffel reported ·64 of a gramme of urea per 1,000 c.c. A week afterwards, catheter drainage going on meanwhile, the patient showed ·72 of a gramme of urea per 1,000 c.c. A fortnight after his admission I did supra-pubic cystotomy, and found the prostate much enlarged, but decided not to remove the prostate because the urea percentage in the blood was so high. The patient still continued to show definite signs of uræmia for at least ten days after the operation; he was slow of speech and forgetful. The blood contained 1·23 grammes of urea per cent., so that it had gone up. After that, owing to permanent drainage which was established by means of the supra-pubic drainage tube, although a fortnight after the operation the amount of urea in the blood had gone up to 2·16 grammes, it came down to ·64 grammes three days after that, that is to

say, 17 days after the operation, and became normal at the beginning of the next month. So, whilst there was a good deal of urea to start with, and the patient showed definite symptoms of uræmia, the establishment of a permanent opening did good, in that, within six weeks of the operation the amount of urea had gone down to the normal; and, as you see, he is now able to come up to the hospital, and he has now no symptoms of drowsiness or uræmia after giving him a permanent opening and a urinal. He has also put on a good deal of flesh since the operation, and has entirely lost the pallid look he had. So please remember supra-pubic cystotomy with a permanent opening as a possible cure in some cases of obstructive uræmia.

The next case I wish to show you I will speak about before he comes in. He is a stoker, and was sent up by Dr. Larkin, of Trinity Square. The man came to see Mr. Hughes at his Out-patients. Mr. Hughes diagnosed enlarged, and probably malignant, prostate, and I was asked to see the patient. I saw him, agreed with the diagnosis, and took him in. He was operated upon. A supra-pubic opening was made, and permanent drainage established. Although before the operation he was losing flesh, he has very much improved since it was done, and has put on flesh, and now apparently he suffers very little inconvenience from his condition or from the opening. He cannot pass water through the normal channel. I will now show him to you. He tells us a little urine is now coming through the urethra, and, of course, the more that comes that way the better. He is only 36 years of age. He is wearing an urinal provided by Down Brothers, and he keeps the tube in position. You will notice that the wound is quite healthy all over. Notice the large amount of flesh he has got on his abdominal wall. Therefore, permanent drainage of the bladder is useful, and apparently causes very little discomfort in cases of neoplasm of the pelvis involving complete obstruction of the urethra; also in cases of uræmia and enlarged prostate where an operation for removal is not possible.

This next man had a stricture, and we did supra-pubic cystotomy on him, and I am showing him as the one example of ventral hernia we have had after supra-pubic cystotomy since the Department was established. The superficial part of the wound is quite secure.

The next case is that of an assistant in Down Brothers' establishment. We explored his bladder, and decided to sew it up for primary union afterwards. The wound has healed up very well indeed, and there is a firm scar.

This next is a man whose wound was slightly stretched, but it is primary union of the bladder after supra-pubic prostatectomy. He has put on a good deal of flesh since, and there is a quite sound scar. There is no sign of hernia. He is one of the cases of prostatectomy which, owing to the assiduity of the dressers, I have been able to show as a case of primary union, as for an ordinary abdominal wound, with no untoward results, but with benefit to the patient.

The next case is one in which supra-pubic cystotomy was done for the purpose of treating a stricture. The operation was done nine days ago. I was asked to see him by Sir Alfred Fripp, with a view to treatment. He had an impassable stricture, with incontinence. I tried to pass an instrument, and got a very fine bougie down the penis, through very gritty material, for about six inches; there its further passage was stopped. Supra-pubic cystotomy was then performed, and the bladder opened. I got hold of a No. 4 catheter, with the view of showing the dressers how very difficult it was to pass a catheter towards the meatus from the bladder, when I found it slipping along easily and emerging at the meatus urinarius; so I

had to modify my remark by saying it might be comparatively easy. Having got that catheter along, I anchored the bougie by means of a silk suture to the catheter in the urethra, and, by gentle negotiation, managed to get the bougie through the normal urethra, which had not in any way a gritty feel, and that means we were in a false passage earlier when we tried to press a catheter into the bladder. Internal urethrotomy was done, and a No. 10 catheter inserted. It was then decided to sew up the bladder, and I show you the patient. Mr. Bulleid has been dressing him, and taking enormous trouble with him.

In connection with that, it is very essential we should have some clear idea as to what we should do when we desire to have primary union of a bladder wound. I have done it in ten. One of the patients was a very stout shepherd from the hills of Herefordshire. Suprapubic prostatectomy was done on him, and primary union obtained. Arthur B. is another example of primary union. I have never regretted it. I have attempted it in a few cases where it has failed, but even so I have not regretted it, because the wound which has been left to heal up has been very much smaller than if I had not tried it. How does one obtain these primary union results after operations on the bladder? By very careful and assiduous dressing; that is the great thing. I have always found that dressers are only too glad to give an enormous amount of trouble to these cases, because they know it only means three or four days of hard work, and after that there are none of the continual changings of dressings which are associated with a supra-pubic opening for, perhaps, two or three weeks after the operation. We wash out the bladder two or three times a day for the first day or so after the operation, with sodium citrate, the physiological solution. That prevents clotting of the blood, and there is then an easy escape of blood from the bladder. After that the patient is washed out with ordinary boracic two or three times a day, and the case goes on as an ordinary abdominal wound case. Please remember not to put in more than four ounces of fluid into the bladder at a time, otherwise you may dilate it unnecessarily and get a bad result. Mr. Bulleid, the dresser, tells me this man has developed a slight cough, which may open the wound somewhat; but I want to show you his primary union of the bladder during its healing stages. I recommend you not to take out the stitches until you are certain the wound has healed up. I think you will agree that this looks no worse than an ordinary abdominal wound. We shall keep the sutures in for five or six more days.

[The wound eventually healed perfectly.]

An Automatic Bladder Irrigator.

During the last few months in a number of cases, which needed frequent bladder lavage, a trial has been made of an apparatus designed to flush out the bladder automatically and at more or less regular intervals. The results have been so successful that a description of the principle employed and of the apparatus itself may be of general interest.

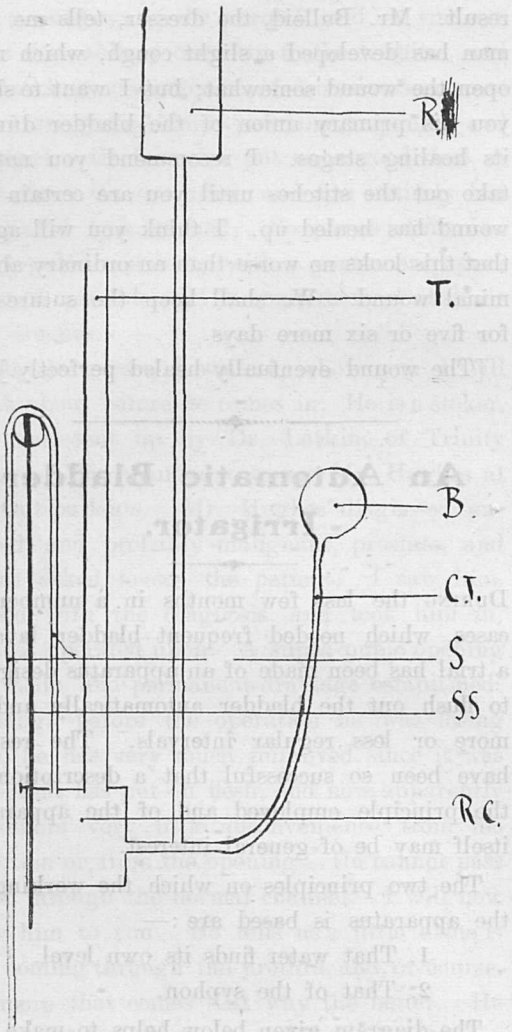
The two principles on which the working of the apparatus is based are:—

1. That water finds its own level.
2. That of the syphon.

The diagram given below helps to make the apparatus clear.

Into a watertight receiving chamber (R C) is fitted laterally one horizontal arm of an inverted T tube; the vertical arm is connected to a reservoir (R) containing irrigating fluid and which is placed above the apparatus; the other

horizontal arm is connected by a rubber tube (C T) to a catheter tied into the bladder (B). The upper surface of the receiving chamber (R C) has two openings; into one is fitted a glass tube two feet long open at both ends, known as the tower (T) and into the other the

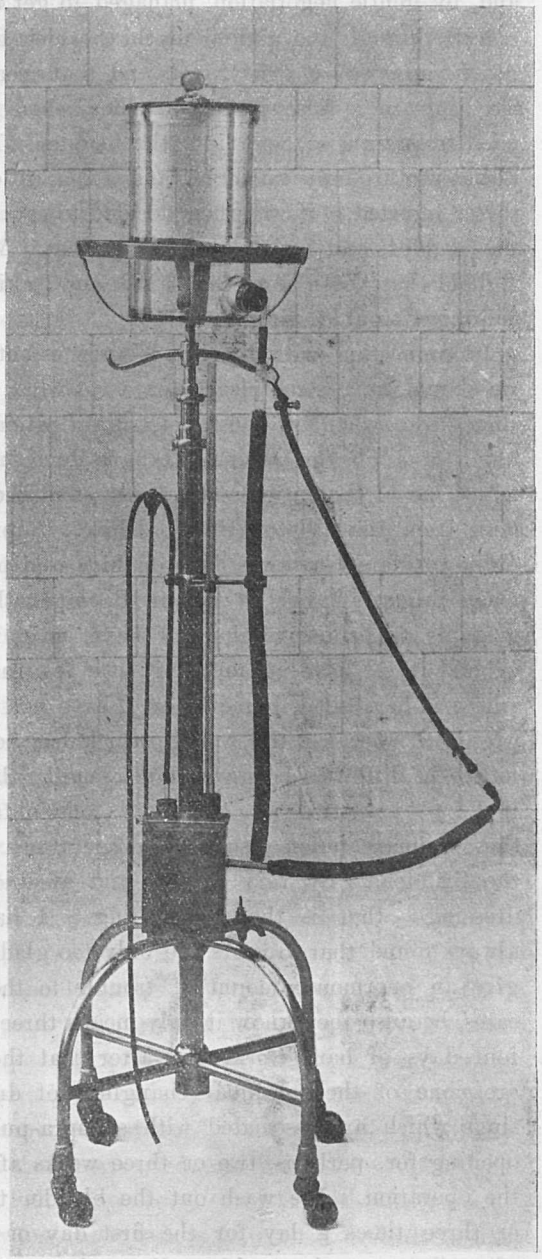


shorter arm of a rubber syphon tube (S) running over an adjustable stand (S S).

The receiving chamber is arranged so that it is at least one foot below the level of the bladder, while the bend of the syphon tube is adjusted above the bladder level.

The working of the apparatus is as follows—

Irrigating fluid flows from the reservoir down the rubber tube attached to the vertical limb



of the T tube and fills the receiving chamber and portion of catheter tube to the same level.

This continues, and the level of fluid rises in the syphon tube, tower, and catheter tube till the level of the bladder is reached. Owing to the natural muscular tone of the bladder there has to be a certain head of pressure in the tower before fluid will flow in. As the bladder relaxes fluid will enter, and at the same time the level in the syphon tube and tower will rise. When the level of the bend of the syphon is reached, the syphon will act, fluid will be discharged from the receiving chamber and, therefore, the level in the tower will fall; when this falls below that of the bladder, the bladder will drain into the receiving chamber and do so till empty. The level in the receiving chamber will then fall below that of the shorter arm of the syphon, air gets in through the tower and the syphon action naturally ceases. The cycle is then repeated.

The apparatus is made to be attached to a saline infusion stand, as is shown in the photograph. The catheter tube is hooked on to the stand for convenience.

The rate of flow from the reservoir is regulated by a screw clamp and the flow can be arranged so that the bladder is washed out at any reasonable interval of time. A certain amount of irrigating fluid, about 2 oz., is used in filling up the different tubes. If the catheter is blocked, there will only be this amount discharged by the syphon.

The best irrigating fluids for use are sterile normal saline, slightly hypertonic saline (120 grains of common salts to one pint), or saturated boracic solution, which is a normal tonic solution. Antiseptic solutions of carbolic, formalin, etc., are detrimental.

The only part of the apparatus which must be kept warm is the reservoir and the direct route to the bladder. The glass reservoir has a flannel jacket, while the rubber tube in the photo is asbestos and rubber covered. Investigation has shown that this is no improvement, and the best way is to lay a hot-water bottle over the rubber tube before it enters the bladder.

Before the apparatus is attached, the receiving chamber and catheter tube must be filled to exclude air, and while in use the only care required is to keep the reservoir charged with fluid at 105°—125° F. and to dispose of the overflow from the syphon.

This apparatus can be used in cases of cystitis, acute or chronic, whether associated with enlarged prostates or secondarily infected from septic renal conditions, on the second day after cystotomy with primary unions of the bladder, in children for incontinence and to restore tone to atonic bladders.

In one particular case of enlarged prostate with cystitis, in which the apparatus was worked for seven days, 90 grams of pus were withdrawn, no discomfort was experienced, and sleep at night was enjoyed without medicinal aid.

In another case of a woman with frequency of micturition from no obvious cause, who had to pass urine every hour on an average, the apparatus was attached for six days, and after this treatment she was only passing urine six times during the 24 hours. In this case the factors of rest in bed and medicinal treatment must also be added.

In dealing with female patients in whom a catheter has to be tied in, the method adopted has been that recommended by Mr. Thompson, who uses strips of half-inch Mead's adhesive strapping eight inches in length. The centres of these are looped round a self-retaining rubber catheter and the ends separated and attached to one thigh. The top strip is placed as close as possible to the vulva.

In conclusion, I wish to express my indebtedness to Mr. Thompson for the opportunities he gave me of using the apparatus on his cases, and to Dr. Ryffel for the advice he gave me when engaged in perfecting the model.

The apparatus can be obtained from Down Bros., Ltd., 21 and 23, St. Thomas's Street.

C. H. LAVER.

Angio-Neurotic Œdema treated by Thyroid Extract.

By G. WINTER DRYLAND, M.B.

Case I.

The primary case to be recorded is that of Mrs. B., who first came under notice in the late summer of 1912. She was then a widow, æt. 35, rather given to blushing; good lashes, teeth mostly filled or false, good eyebrows, and plenty of fine hair rather dry and wiry; complexion a little muddy, manner always rather nervous. She was slim and fair, with a permanent malar flush. She was a lady of good education and considerable intellectual capacity, being an excellent and qualified masseuse. There was a slight drooping of the eyelids, giving an expression of heaviness, instantly dispelled by her quick and jerky speech. She was energetic and hardworking.

Her personal history was uneventful up to 18 years, when she began to menstruate, a function which had never become regular or frequent to date. At 18 she fell off her bicycle, and there followed immediately, as a result of contusion, a curious swelling around the knee, which in the light of subsequent knowledge she recognised as the first onset of her recurrent œdema. The next attack involved her whole face, starting from the eyes. It followed a long bout of crying over a bereavement, which she considered to have been the cause. She was still in fair health, but was getting "bilious attacks" at every period, and sometimes between, accompanied by very severe pain, always referred to a very small area roughly corresponding to McBurney's point, and not painful on deep pressure.

She began to be very easily tired. At 23 she was married. About then she began to suffer from chronic thirst, took a dislike to meat, but relished cream, milk, fat, butter, salad oil, etc. Hitherto she had always been a great meat eater. She also at that time began to suffer from extreme lassitude. The bilious attacks became by degrees a fortnightly occurrence. She complained bitterly of the cold, and, after moving to a chalky district in Kent, all her symptoms were aggravated. Perhaps the calcium overtaxed an already sluggish thyroid. During the first 18 months of married life, most of her teeth, which had been excellent, decayed suddenly. She had had much worry at that time, and the second outward and visible attack of the œdema appeared during the first year of married life. After seven years her husband died, of acute illness. No pregnancies had occurred, and during the whole time the œdema was persistent at irregular intervals. After becoming a widow she fell very low in the scale of health, and lost all power of concentration and a good deal of her mnemonic power. At 32 she went to Algiers for ten months, and while there improved, living very largely on a vegetarian diet, with French cooking, and everything swimming in grease, oil, and butter, in which she revelled; under which regime the "bilious attacks" abated—a clue to their origin—and her digestion improved. It is notable that anyone who suffered from what she called biliousness should be able and willing to ingest such large quantities of fatty food. The attacks were no doubt internal manifestations of the œdema, the crises mentioned as a feature of the disease by so many authors. In Waller's book on Thyroid Therapy is recorded a case of similar bilious attacks cured by that agency, and he also notes the love of fat of the thyroid deficient, so that the two conditions are not incompatible as might appear.

For 12 months after leaving Algiers she was

comparatively well, but thereafter settled in a limestone district and gradually all the old trouble began again with increased malignancy and the added trial that her hair began to come out literally in handfuls. She was first obstinately constipated and continually so, from the time of installation of the menstrual activity, perhaps due to the activities of her thyroid being occupied in the production of that function. She had never known in her life what it was to perspire appreciably, but never had any chillblains. Her family history is illuminating. Her mother has been a lifelong victim to typical angio-neurotic œdema, but declines treatment. The mother's sister was similarly affected, and died from (?) acute nephritis at 31. May this have been an acute œdema of the kidneys? This lady's aunt and her brother also suffered in the same way. When I first saw her in 1912 she was in a very hopeless frame of mind. She came complaining of an acute, pale, waxy œdema of her right hand. There was numbness, but no pain. The œdema was elastic, declining to pit on pressure; there was no cyanosis. The hand presented much the shape of an inflated rubber glove, the fingers being so stiffened as not to allow of much voluntary movement. The swelling declined fairly abruptly to a normal-looking wrist. She looked very tired and neurasthenic. Temperature below normal; pulse high at beginning of interview, 86 at end; B.P. 100 sitting down; well marked dicrotic. She complained of having felt utterly slack for several months, and as if she hadn't a friend in the world. Bilious attacks with the localised pain and very bad headaches were recurrent about every ten days, and she had backache, leg-ache, flatulence, and occasional palpitation. There was no goitre. It was a fairly clear case of angio-neurotic œdema, and calcium lactate, grs. 10, thrice daily after meals, and acetyl-salicyl acid, grs. 10, twice a day between meals were ordered. The urine was free from abnormality. The result of this treatment was that the incubus subsided in about 56 hours—about the usual time—the lady kindly attributing this to the treatment.

The patient was put on a tonic for 3 weeks, at the end of which time she came in not feeling markedly better, and with another swelling, this time on the forearm. The tonic was intermitted, and the original treatment resumed. A couple of nights later she knocked her forehead slightly. In three hours her face was unrecognisable, and the œdema had spread to such an extent that respiration was impeded by involvement of the glottis, so that tracheotomy was seriously considered. However, a gradual subsidence occurred, possibly aided by swabbing the fauces, etc., with adrenalin. No doubt what had really happened was that the calcium and salicylates had further tired an already incompetent thyroid. The question of preventing a recurrence of these midnight alarms had to be considered, and further investigation brought to light many of the points already recorded, notably hair falling out, thirst, dry skin, constipation, sterility, the utter lack of energy, with no anæmia, or other obvious cause, and all the other now familiar items pointing to thyroid insufficiency, though less familiar at that time (four years ago). So three half-grain doses of thyroid extract (Oppenheimer's, in palatinoid form) were ordered, presently increased to four, together with some cascara.

On the third day she reported herself as feeling happier in every way, and during the third week it was found possible to reduce the cascara and still to obtain a satisfactory daily evacuation. After about six weeks she went away, and, of course, treatment was discontinued. About three months later she wrote saying that the bilious attacks had returned, two lumps had appeared in quick succession, and that after the only three regular periods

she had had in her life she had missed again. As she was shortly returning, a supply of thyroid extract was sent, and the treatment was this time continued until a distinct rise of pulse rate, flushes, slight palpitation, looseness of the bowels, and most striking of all, certain profuse sweats, chiefly axillary, the first she had ever experienced, characterised by a strong and peculiar odour, became part of the symptom picture. These sweats were a most fortunate occurrence, for ever after it was found that they constituted an early and reliable sign that treatment had for the time gone far enough. This was repeatedly verified by control. After six weeks of supervised treatment—following the plan of three weeks on, a fortnight off—it was thought that a long experimental rest might be allowed. She went to France in great spirits, every one of her unpleasant symptoms having gone. The next thing was a bumped forehead whilst at Dax in 1914, followed immediately by a repetition of the previous phenomenon—breathing became difficult and swallowing impossible. When I saw her a month later she said that all her old troubles had gradually recurred previous to this attack. For about nine months, therefore, she continued on the plan of taking $1\frac{1}{2}$ grains daily until the sweats came on and then resting for a week or two. This was as successful as before. Finally she got headaches and flooding at the menstrual times, and it became evident that she was having more than enough; and the war having claimed the writer, treatment ceased. She has now been massaging soldiers for 18 months, having had no treatment for the last 14, with no recurrence of her old troubles until the last three months, when she has had two very slight attacks of the œdema, both following extra strenuous massage. She has been in splendid health, stands fatigue well, has a daily morning evacuation without medicine, menstruates regularly without pain—which she had never done before commencing treatment—and sweats when she takes exercise. She has not been so well lately, and along with the two attacks of œdema there have also recurred certain attacks of transient unconsciousness, which, for convenience, are mentioned with the next case, which I will proceed to describe.

CASE II.

This patient, Miss B., acting matron of a hospital, was afflicted in a similar, but less acute, manner. Her age is $47\frac{1}{2}$, but she looks ten years older, being quite grey. The outer third of both eyebrows is missing. Her story is that a year and a half ago, after a great deal of worry and anxiety, she began to feel dreadfully tired. Her periods had come to a sudden end a year before, and she only once subsequently menstruated after a two year interval. Her hair turned rapidly, and began to come out prodigiously. Her teeth, which had been pretty good, rapidly became carious. Six months after the onset of these symptoms she began to notice transient white, painless elastic swellings, lasting from a few hours to two days, coming at more frequent intervals, until there would be less than a week between their appearances, chiefly on the left forearm, inner side of left thigh, and right iliac region. Her bowels had always been constipated; she could never keep warm in winter, and was often glad of a hot bottle in Midsummer. She had never had chilblains, and never sweated. Her family history is interesting, being what I may call thoroughly glandular. One sister died with Parry's disease; one died of an uncertain cause, which from the account given seems almost certain to have been lymphatic leukæmia. Three aunts died of neoplasm in one form or another.

Treatment started with three $\frac{1}{2}$ grains of thyroid extract daily. In a week she volunteered, without any suggestion, to say that she felt less tired than she had done for a long time—although that particular week was the hottest of the summer—but complained of flatulence and indigestion about half an hour after meals, although her bowels were better. It was thought that the encouragement given to the thyroid had taken the pancreas by surprise, so the dosage was changed to extract thyroid gr. $\frac{1}{4}$ and extract pituitary gr. $\frac{1}{4}$, after each meal, in the hope that the latter would reinforce the former, without tiring the pan-

creas. The indigestion disappeared, and improvement continued. After ten days a much overdue swelling appeared on the left forearm. It was much smaller than usual, and lasted a few hours. A month later the patient wrote saying she felt better than she had for a long time, the local manifestations had completely gone, and the bowels were better.

There is one more point about these, the writer's, cases. Both suffer from recurrent attacks of giddiness coming on nearly always after fatigue or emotion. The patient has time to lie down and then becomes unconscious. Neither has any demonstrable heart lesions. These fits are not ordinary faints, and they have none of the usual characteristics of hysteria. They are accompanied by a feeling of fulness, and in one case, of pain in the top of the head, and the pulse becomes slowed. Return to consciousness is accompanied and succeeded by a profound sensation of pins and needles, particularly in fingers and toes. These manifestations, in the first case, became more rare as the other symptoms improved, and only recurred after ten months' abstinence from treatment. The second case has had none since the treatment began. Neither patient is anæmic, and the writer ventures very tentatively to suggest that they may be due to a transient œdema of the cerebral tissues. There do not seem at any time to have been any localising signs or symptoms. Among a series of cases (published with commentary by Osler, in vol. xii. of Brit. Journ. Dermat.), exhibiting angio-neurotic œdema or allied conditions with visceral lesions, is noted the occurrence of recurrent and transient attacks of hemiplegia, which he attributes to tumescence of the brain substance, and the occurrence of these (?) cerebral attacks in cases of a nature allied to those reported by Professor Osler seems to point to a similar conclusion. The first of the cases here reported had regularly recurrent gastric crises, characterised chiefly by nausea and vomiting, but exhibiting less pain than the cases of Osler, the pain being, as in his cases, always referred to one spot.

The ever-growing mass of thyroid literature is of such vast proportions that no pretence is here made to have searched through more than a small fraction of it, but a search through several descriptions of angio-neurotic œdema has been undertaken, without finding any English record of trial or failure of thyroid treatment, nor in a good many classical descriptions of the activities of the thyroid has there come to light a record of its use in these cases. The only record found is that in Waller's book on Thyroid Therapy, of one case so treated, and treated with complete success.

This case of Waller's, a girl of 20, much more nearly resembled the "blue œdema" of Charcot, exhibiting hyperæmia, itching tingling, etc., and though she had had frequent attacks for several months, immediately improved on calcium lactate in conjunction with thyroid. The duration of the attacks became limited to a few hours only and after three weeks they had entirely ceased. They had not recurred six months later, but Waller does not say how long treatment was continued. The writer had a similar case in a lady of 47 years, just entering on the last stages of the climacteric. The swellings showed a predilection for her forearms, neck and thighs, and improved extremely slowly under calcium administered at short intervals for a considerable time. She is at the present time exceedingly stout, short of breath, with hair grey and coming out, cold hands and feet, and a very marked malar flush; and it seems reasonable to suggest that just when the climacteric had put a strain on her thyroid gland, the œdema may have been an early manifestation of its fatigue. The comparative failure of the three cases just mentioned to improve on calcium coincides suggestively well with Waller's theory that the calcium cannot adequately be made use of in the body in face of an inactive thyroid, but merely tires the latter still more; whereas in the two cases where thyroid was supplied as well, or alone, the most marked and immediate improvement took place. It would be interesting to note the effect of thyroid administration to the gentleman, classically described by

Turney in Sir Clifford Allbutt's System of Medicine. He used to develop pale swellings, chiefly about the head and face, apparently induced by cold, and of such a degree of urgency that on two occasions tracheotomy was performed just in time to save his life. It is expressly stated that the reaction of his blood showed the presence of an adequate supply of calcium, and that the administration of more failed to effect improvement, and Waller's theory suggests that though the calcium was there, the thyroid had struck work, so that the former could not be made use of. In my parallel cases I gave no calcium after the first few days, the continued exhibition of the thyroid securing perfect immunity so long as it was persevered with, and these cases, like Turney's, were of the "family" type, admittedly the most obstinate. In this connection Osler remarks, "Is it a disease sui generis, or merely a symptom complex with relations more or less close with other affections and a varied ætiology? An affection which breeds true through six generations and presents in each identical features, seems worthy of the dignity of a disease." "But," he continues in 1915, "the œdema itself is only a symptom, behind which is the effective cause *for which we have so far no clue*." It is, to a great extent, this pronouncement by so good an authority which forms the excuse for this paper, in which are set out cases with an almost identical symptom complex, and the suggestion humbly put forward (on an admittedly insufficient basis as regards number) is, "may not the effective cause to which we have no clue" be a deficiency of *one* of the constituent hormones of the thyroid? Osler claims mild success with only two drugs nitrates and calcium. Is it now orthodox to regard the thyroid as arbiter of calcium metabolism? The limited clinical experience of the writer all goes to show that in many of these conditions where calcium is indicated or is deficient—to take one instance only of each, rickets and chilblains—it is possible to get results apparently better with thyroid only, since apparently there is enough calcium about, but the power of assimilating or utilising it is lowered.

The following rough translation from the French of Levi and Rothschild's book "Minor Thyroid Insufficiency," which was very kindly lent me by Dr. Herbert French, seems apposite to this matter. Speaking of œdema as evidence of hypothyroidism, they proceed as follows:—"Acute transitory œdemas, not pitting on pressure, not following the laws of gravity, subject to recurrences. The skin covering the œdema is either pale or more or less hyperæmic. They may appear about the face, or simulate a gumboil, about the eye, the forehead, the feet, etc. They are sometimes definitely localised in the vocal chords, or produce nasal obstruction. The thyroid origin of the œdema receives justification from a number of characteristics :—

1. They are independent of cardiac, renal, or cachectic symptoms.

2. They co-exist with recognised symptoms of hypothyroidism.

3. They appear in the course of paroxysms of thyroid insuffiency.

4. They alternate with certain symptoms of that nature.

5. They are susceptible of cure by thyroid medication, as we have recorded in several cases, but it is desirable from the therapeutic standpoint, to distinguish the two varieties of acute thyroidal œdema.

(a) Hypothyroid œdema in a passive secretory disturbance, supervening, for example, at the menstrual times, and covered with pale skin.

(b) Hyperthyroid œdema produced by hyperthyroidism, and covered with hot, red skin. In the former the effect of treatment is rapid, and in the latter it may be slow of production."

This coincides with the writer's findings. In the cases of class (a) here recorded, the effect of treatment was well in evidence in less than two days; in a case of class (b) accompanied by flushing, and other possible signs of temporary, spasmodic hyperthyroidism, treatment was not tried, but it is interesting to note that three years later the patient has evidence of hypothyroidism. On the other hand, Waller's case of type (b) improved at once.

Guy's Hospital Physiological Society.

A MEETING of the Society was held on Monday, January 22nd, when Mr. W. H. Steavenson, F.R.A.S., read a paper on "Some Aspects on Vision."

Mr. Steavenson dealt with the question from the point of view of Astronomy, a subject of which he has considerable practical knowledge. His first point was the size of the pupil in an eye adapted to dim light. Many authorities state that it returns quickly to the normal; Mr. Steavenson found from flashlight photographs that it is considerably enlarged after 20 minutes in dim light. This has a practical application in that the minimum effective power of the eye-piece of a telescope, and therefore the field of vision, varies with the size of the pupil.

He next dwelt on the question of indirect vision. Owing to the fovea being less sensitive to light than the peripheral parts of the retina, a faintly luminous object is invisible when directly looked at, but appears when the gaze is directed to another quarter. Many stars invisible to direct gaze can be seen by this method.

Mr. Steavenson touched on the variations in luminosity of coloured stars in fresh and fatigued eyes; the increasing persistency from red to violet rays on the retina which caused a peculiar illusion of a lagging behind or curving of a spectrum moved rapidly across the field of vision; the alteration in comparative luminosity of two stars when looked at with the line joining them parallel, and then at right angles to axis of the observer's eyes.

He concluded his paper with an interesting experiment on after images, in which there was alternation of colours. Mr. Steavenson illustrated his paper with many diagrams on the black-board.

The discussion which followed dealt with the main features of the paper. The reason for the apparent increased size of the moon when just above the horizon was asked and several interesting theories were propounded.

Massage Department and School Report for 1916.

DURING the year 69 students entered for training in massage. Of these—

8 failed to complete their training owing to various causes.

54 gained certificates.

3, being minors, will be unable to enter for the examination till 1917.

3 failed in part of the examination, and are re-entering in 1917.

1 failed completely, and has left the hospital.

At the present time there are 47 students training, 31 in massage and 16 in Swedish Remedial Exercises (S.R.E.).

The Staff consists of one fully trained Teacher and three Assistant Teachers, two of whom are training for the Teachers' Examination.

The statistics show a very large increase in the number of patients during the year, and there are some 350 patients now under treatment.

Large screens have been fixed in the gymnasium to allow for the treatment of private patients.

An improvement, which is a great convenience, is a series of blackboards fixed to the walls on two sides of the three class rooms.

Owing to the increase of S.R.E. students, several pieces of apparatus have been added to the gymnasium.

STATISTICS.

1916.		1915.	
No. of New Cases.		No. of New Cases.	
In-Patients ...	603	In-Patients ...	385
Out-Patients ...	1,744	Out-Patients ...	1,112
Total ...	2,347	Total ...	1,497
No. of Treatments.		No. of Treatments.	
In-Patients ...	10,147	In-Patients ...	5,47[illegible]
Out-Patients ...	39,312	Out-Patients ...	19,751
Total ...	49,459	Total ...	25,222

January 15th, 1917.

Pass List.

University of London.

At the First Examination for medical degrees held recently, the following candidates were successful:—J. A. Currie, E. W. Felce, J. B. McCann, T. A. Shaw, G. M. Stoker, W. H. Summerskill, L. R. A. Wells.

Royal Colleges of Physicians of London and Surgeons of England.

At a meeting of Comitia of the Royal College of Physicians on January 25th, and of the Council of the Royal College of Surgeons on February 8th, diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the following candidates who have complied with the bye-laws of each College:—A. T. Dabbous, T. L. Heath, F. R. Leblanc, M. C. Joynt, C. R. Smith, J. G. Stevens.

As the result of the Final Examination held by the Examining Board from January 9th to the 24th, the

following Candidates were approved in the undermentioned subjects:—

Medicine.—C. M. Joynt, J. A. Martin, H. N. Pritchett, M. Pearson, J. W. H. Grice, J. C. C. Howe, D, V Halstead, F. R. Leblanc, W. J. Walters, A. T, Dabbous, N. H. S. Maelzer, H. D. Apergis.

Surgery.—M. Pearson, F. R. Leblanc, A. T. Dabbous, C. R. Smith, J. G. Stevens.

Midwifery.—E. W. Bowell. J. W. H. Grice, F, J. Harrington, R. S. Millar, A. B. Cocker, C. G. Coombes, G. R. Hubbard. T. L. Heath, J. O. R. Montocchio.

Royal College of Surgeons of England.

Licence in Dental Surgery has been conferred upon R. J. Ryland, who has now complied with the requirements.

FIRST PROFESSIONAL EXAMINATION.

Mechanical Dentistry and Dental Metallurgy.—At the examination held last month the following candidates were approved:—H. M. Marshall, W. H. Turner, S. V. White.

Appointments.

R.N.M.S.

The following notifications are announced by the Admiralty:—

Fleet Surgeons C. M. Beardnell, to the *Vernon*; P. M. May, to the *Pembroke*, additional for disposal.

Staff Surgeons to be Fleet Surgeons: A. J. Wernet, A. R. Thomas.

R.N.V.R.

Surg. A. H. Crook, to the *Victory*, additional.

R.A.M.C.

To be temp. Lieut-Col. whilst employed at the Grove Military Hospital, Tooting:—E. W. Goodall.

Major R. G. Anderson is restored to the establishment.

Capt. K. B. Clarke relinquishes his commission on account of ill-health, and is granted the honorary rank of Captain.

F. H. Knaggs to be temp. Capt. whilst employed at the Huddersfield War Hospital.

Temp. Lieuts. to be temp. Captains:—J. B. Dunning, M.B., E. Evans, L. S. H. Glanville.

To be temp. Lieuts.: H. F. Stephens, J. L. Johnstone, A. L. Gardner, W. E. Tanner, J. Howells, T. E. Micklem, T. L. Heath.

Special Reserve of Officers.

Lieuts. to be Captains:—J. Bennett, R. S. Aspinall.

Capt. L. D. B. Cogan to be acting Lieut.-Col. whilst commanding a Field Ambulance.

Civil.

C. R. Shattock, L.R.C.P., M.R.C.S., L.D.S. Eng., has been appointed School Dentist to the Chiswick Education Committee.

Harold Maurice, L.D.S. Eng., has been appointed Dental Surgeon to the Red Cross Auxiliary Hospitals for Officers, Brighton.

Change of Address.

Capt. T. E. A. Carr, 1st Field Ambulance, 59th Division, B.E.F., France.

W. J. McAllan, Surg. Prob., H.M.S. *Abdiel*, c/o G.P.O.

Major J. Wallace Kemp, R,A.M.C., 1st London Casualty Clearing Station, B.E.F., France.

B. Burnside, Temp. Surg., H.M.S. *Vindictive*, G.P.O.

Lieut. B. E. Jerwood, Indian Expeditionary Force, c/o Presidency Postmaster, Bombay.

Lieut. J. B. Martin, 44th General Hospital, c/o D.D.M.S. Base. Mesopotamia, Expeditionary Force, Overseas.

Births.

MYER.—On Feb. 6th, at Cambridge Terrace, Hyde Park, the wife of Leonard Myer, M.R.C.S., of a daughter.

PINCHING.—On Feb. 4th, at Frampton-on-Severn, Stonehouse, Glos.. the wife of W. J. Pinching, M.R.C.S., L.R.C.P. (*née* Dorothy Woodward), of a son.

ROBINSON.—On February 18th, 1917, the wife of W. Beresford Robinson, M.B., B.S. Lond., of a daughter.

Marriages.

MICKLEM—BOLLARD.—On the 15th inst., at the Congregational Church, Hemel Hempstead, by the Rev. N. Micklem, M.A. (brother of the bridegroom), assisted by the Rev. Frank Johnson, Minister of the Church, Thomas Esmond Micklem, M.B., B.Ch., Lieut. R.A.M.C., second son of Nathaniel Micklem, K.C., and Mrs. Micklem, of Northridge, Boxmoor, to Eleanor, daughter of Mr. and Mrs. Bollard, of Abbeyleix, Queen's County.

ODAM—SOPER.—On the 10th Jan., at the Baptist Church, Okehampton, Devon, by the Rev. W. T. Soper (father of the bride), assisted by the Rev, F. Birtley, Charles Leslie Odam, M.R.C.S., L.R.C.P., son of Charles Odam, Esq., of Dartmouth, to Ivy Gladys, youngest daughter of the Rev. and Mrs. W. T. Soper, of the Moorlands, Okehampton.

Deaths

FLOWER.—On Feb. 5th, at Hendford, Yeovil, George John William Flower, M.R.C.S., aged 66.

WALLIS.—On Jan. 29th, at 21, Heneage St., Helston, Cornwall, Basil Wallis, M.B., B.S., M.R.C.S., L.R.C.P., aged 35, dearly beloved husband of Alice Wallis.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

WE publish this week a list of old Guy's Sisters and Nurses who are engaged in war nursing at home and in different parts parts of the world. The total of well over four hundred and fifty is one of which the Hospital may be proud. We would have liked to have seen the list appear in the same issue of the GAZETTE in which we bade farewell to Miss Haughton. We feel sure that it will be a consolation to her on leaving the Hospital to realise how many of those she has trained are serving their country. Unfortunately the work involved in compiling this record has been so heavy that it could not be ready in time. We wish to express our gratitude to those who have been good enough to work at it. We hope that the record may be kept up to date by those concerned notifying any additions or corrections to the Matron's Office.

WOUNDED officers on their discharge from Base and other Military Hospitals in England are now being sent in many cases to recuperate at Auxiliary Hospitals until they are fit for duty, when after a short period of leave they rejoin their depots. This brings the procedure in the case of officers into line with that of men. There is no doubt that in some cases officers discharged from hospital have tended to try to lead a more active life than their state of health warranted, and have thereby delayed their return to duty. On the other hand, one cannot help feeling sorry for many, especially married men, who are denied the comforts of their homes.

WE publish in this issue an Abstract of the Summary of Anæsthetics and Operations for the year 1916. A comparison with 1914, which, in spite of the outbreak of war, may be regarded as a normal year, shows that there is no great difference in the number of general anæsthetics given. The number in 1914 was 7,675 as compared with 7,752 given last year. The number of anæsthetics in the Dental Department has declined by about 700. As far as choice of anæsthetic is concerned the popularity of ether alone or combined with gas has diminished. In 1914 it was used 2,254 times compared with 424 times in 1916. "Other anæsthetics and sequences" have gone up from 1,536 in 1914 to 3,120 last year. This increase is probably due to the practice of inducing with C.E. followed by ether.

Compared with 1914 the Staff Anæsthetists gave about 400 fewer anæsthetics last year, while House Officers gave over 1,000 more.

The effect of the war is shown by the reduction of administrations by qualified men other than House Officers from 1,077 in 1914 to 333 in 1916.

Turning to the performance of operations in the General Wards, we find that the Surgeons did 1,143 operations as compared with 865, while the number performed by Assistant Surgeons was diminished from 1,031 to 855. The R.S.O. did about 100 more and House Surgeons and Assistant House Surgeons 200 less than in 1914. The number performed by Dressers is about the same.

About 16 per cent. of the total number of operations in the General Wards were performed by Dressers last year, while in the Out-Patient Departments the percentage of operations by Dressers is very much higher. From these figures it will be obvious that Dressers have unrivalled opportunities of obtaining practical experience.

We regret to hear that Sir Cooper Perry has lately been confined to his house as the result of a fall.

The *Lancet* of March 3rd publishes a table showing the total number of medical students who in January of this year were working for medical degrees. It would appear that of students in their first, second, and third years almost one-half are women, while of fourth and fifth year students, only about one-sixth are women. At present there are many openings for women as Residents in Provincial and the smaller London Hospitals. What the effect will be on the profession as a whole it is difficult to predict. Though the total number of men who will qualify between about 1919 and 1921 will probably be considerably below the average, it must be remembered that the end of the war will release a large number of men who qualified during or just before the war and who will have to look about them for the means of making a living.

The difficulty of obtaining vehicles for the conveyance of patients from the District to the Hospital is daily becoming more acute. We hear that of the last six cases brought in at night four had to be wheeled on theatre trolleys. Anyone who has experienced riding on an unsprung trolley with wheels of about four inches in diameter over the Borough roads will recognise that it is not an ideal method of transport for anyone who is seriously ill. Failing a proper ambulance it might be possible for the Hospital to provide a well-sprung two-wheeled stretcher for the use of the externs. We fear that unless something is done in the matter there may one night be an unfortunate episode in the public streets. A possible solution might be an arrangement with some firm of car or carriage proprietors that if they were rung up during the night they should send a vehicle.

We wish to remind our readers that the postal address of the Hospital is now S.E. 1. The subdivision of postal areas will greatly diminish the work of the post-office sorting staff in London, and it is hoped that everyone will remember to put the correct number after the letters, otherwise letters may be subject to delay.

We are publishing further particulars of the Guy's Hospital War Savings Association which, unfortunately, had to be held over from our last issue. The advantages of the War Savings Certificates obtainable from the Association will be obvious to all.

We hear that at an inquest recently the coroner, Dr. Waldo, asked one of the medical witnesses whether he was a Turk. It is about time that this official learnt not to take advantage of his office to insult gentlemen of foreign nationality who are generous enough to give the Hospital their services when they might easily obtain highly lucrative employment elsewhere.

Guy's Hospital War Savings Association.

For the benefit of the Guy's Hospital War Savings Association the President and Governors, on the 12th instant, invested £1,000 in War Savings Certificates, to be purchased by members of the Association. This is of twofold advantage :—

(a) To the country, since subscriptions for all War Savings Certificates bought before the 16th instant went direct to the War Loan.

(b) To the members of the Association, since there will be this large stock (1,300) of Certificates all dated February 12th, 1917.

To show how excellent an investment the War Savings Certificates are, and of how great advantage it is to be able to purchase through an Association "pre-dated" Certificates, it may be of interest to see what rate per cent. they give :—

If a Certificate is bought outright, it "matures" at five years from the date marked on it, and bears interest at £5 5s. 7d. per annum.

If it is pre-dated 3 months, the rate of interest is £5 10s. 3d. per annum.

If it is pre-dated 6 months, the rate of interest is £5 16 6½d. per annum.

If it is pre-dated 9 months, the rate of interest is £6 3s. 7d. per annum.

Doubtless before this stock of Certificates is all purchased there will be many to whom are allotted those of 9 months' previous date, or even earlier, and who will, therefore, receive interest at the rate of more than 6 per cent. on their money. Thus, it will be seen that, purchased through an Association, these Certificates are among the best investments obtainable, and it may be added that this applies to small and large subscribers alike, since Income Tax is not charged on War Savings Certificates, and it is open to all to purchase them up to 500. Indeed, it is reported to-day (February 20th) in the *Times* that there are many inquiries whether this limit should not be removed. War Savings Certificates, therefore, can be recommended as an investment to all whether of large or small means.

The Guy's Hospital War Savings Association was started on August 3rd, 1916, and now numbers 330. It has done well, but not well enough, and until everyone at Guy's has joined, and has also induced others connected in any way with the Hospital to join, it will not have done well enough.

Saving will be *more than ever necessary* as time goes on, and in urging everyone connected with Guy's to join the Association and make it worthy of its name, it is not for this consideration alone that we do so. The money subscribed goes direct to the country, which needs every penny we can give, and the benefit is very great to the subscriber, both in helping to cultivate the habit of saving, and in enabling him to place his savings in an investment which is safer and better than anything else that could be found. War Savings Certificates are charged on the Consolidated Fund of the United Kingdom, and are guaranteed by the British Government, which has the power to raise by taxation all the money required for meeting its obligations. There is, therefore, nothing better to be found either in security or in the rate per cent.

Some Diseases which have become common among Soldiers in this Country.

III.—CEREBRO-SPINAL FEVER.

This disease is one for which the Medical Officer, whether attached to unit or hospital, should be constantly on the look out, especially at this time of the year; both from the military standpoint and that of the individual patient, early diagnosis is of the utmost importance. When you consider that the population of a training centre is always shifting, with a continuous influx of recruits taking the place of outgoing drafts, you will realise that only the utmost promptitude in the segregation of contacts will prevent the broadcast dissemination of "carriers."

And from the point of view of the patient, statistics show that the percentage mortality is reduced by early treatment. Thus, in a recent review of 95 cases occurring in the navy, Rolleston records the following figures:—

First Injection of Serum.	Cases.	Deaths.	Recoveries.
1st to 3rd day ...	74	29·7 %	70·3 %
4th to 7th day ...	15	33·8 %	66·7 %
Later than 7th day ...	6	50·0 %	50·0 %

It must be remembered that in the winter months the commonest illnesses amongst healthy troops are acute infections, mostly "coryza" or "influenza," tonsilitis, pneumonia, etc., any of which, if the onset be severe enough, may simulate cerebro-spinal fever, and for every case of the latter one gets, perhaps, a hundred of the less fatal complaints. So that it is not surprising that the majority of cases of cerebro-spinal fever are, in the first instance, sent up to a general hospital as cases of coryza, though in the interests of all concerned it is best that they should go direct to an isolation hospital.

The onset is, in the vast majority of cases, sudden, so that the man can tell you the exact hour at which he was taken ill. The initial symptoms are headache and vomiting, which are, as a rule, shortly followed by pain most frequently in the back of the neck, or in the back; less commonly in the legs.

There are, of course, a number of cases in which the disease progresses from this onset with appalling rapidity—the so-called fulminating type—death ensuing in from 24 to 48 hours. Often the patient is unconscious before the M.O. sees him, and if one is called to a man taken suddenly ill, and finds him violent and raving, cerebro-spinal fever is, I think, the most likely diagnosis, especially if one can ascertain that he has a temperature. I have even seen a patient who passed out of this state of cerebral irritation into that of depression not less than eight hours after being taken ill, and died comatose a few hours later. At the other extreme I saw a case recently which had remained diagnosed as coryza in a general ward for three days before anything more serious was suspected. In the majority of cases, however, the disease takes a middle course between these limits, and the M.O. should have both time and data for his diagnosis.

The temperature is usually raised to 101°—103°, but in a small percentage of cases is subnormal.

The pulse is commonly rapid in proportion to the temperature, but a pulse which is very slow in comparison with the temperature is a striking feature of some cases, and, occurring early in an infection of acute onset, should by itself excite the suspicion of cerebro-spinal fever.

The Rash.—In Rolleston's series a rash was noticed in 49 per cent. of cases, but in my own experience it has been less frequent. It is thus clear that its absence is of little or no value in the differential diagnosis. The typical spots are purpuric; they are often few, scat-

tered and fine, so that they have to be looked for, less frequently profuse and large. They appear nearly always during the first 48 hours, in most cases at about the 24th hour after the onset.

There is, however, another rash which though rare, is nevertheless important from a diagnostic point of view. This consists of papular erythematous spots appearing early in the disease, first on the trunk and subsequently on the limbs, including the palms of the hands and soles of the feet. These spots vary in size from that of a threepenny piece, and fade with extreme rapidity. Thus, in a case of a patient I saw at Malta who developed the disease while in hospital for dyspepsia of long standing, the onset was acute, with headache, shivering and vomiting at 2 a.m. one morning, at 2 p.m. the same day there was a profuse erythematous rash on the trunk, but so little evidence of meningitis that a consulting physician who saw him at this time had no suspicion of the true diagnosis. Five hours later the rash had spread on to the legs, and the neck was a little stiff. By next morning—30 hours after the onset—the rash had completely vanished and the signs of meningitis were fairly definite. I have quite recently seen another similar case in which the rash was beginning to fade before the nervous signs were at all well marked, and lay stress on the importance of this comparatively uncommon eruption as being less likely to excite suspicion than the well-known purpuric spots.

Central Nervous System.—There is probably always some mental abnormality which is more likely in its earliest stages to be noticed by the man's immediate companions than by the physician. The patient is most often irritable, complaining all the while of his headache or the pain in his neck, and resenting interference—for instance, lumbar puncture; but he is sometimes dull, heavy, and stupid. Delirium, when it does occur, is generally rather violent, and the patient is quite incoherent and speechless—in distinction from a case of acute mental disease.

In the early stages of cerebro-spinal fever facial or ocular palsies, optic neuritis, or hemiplegia are usually absent, and I have never seen any one of these localised phenomena develop until there have been present quite definite neck stiffness and a positive Kernig's sign which are, therefore, much the most important points to look for.

Of these the neck sign is far the more constant and useful. The patient is made to lie still on his back with shoulders flat on the bed, and the head is then tilted forward so as to approximate the chin to the chest, the sequences to be looked for being pain and stiffness in the back of the neck, either of which may be the predominant feature in a case of meningitis, though they are more commonly present together. The degree of pain and stiffness which constitute a positive "neck sign" can be determined only by experience, but I would point out that the true pain of meningitis is situated deeply in the back of the neck and must not be confused with the accentuation of headache caused in any disease by this movement.

Kernig's sign is elicited by first flexing the thigh to a right angle with the trunk and then fully extending the leg upon the knee. Here again it can only be a matter of opinion as to the exact degree of pain or stiffness which constitute a positive Kernig's sign. In an adult with good muscular tone it is not possible completely to extend the leg in this position without causing pain at the knee-joint, but the normal angle can only be learnt by experience. I should call a "well-marked" Kernig's sign present where the leg can only be bent to an angle of 45 degrees with the thigh on account of protective spasm of the flexors. The pain elicited in meningitis is usually at

the knee, but sometimes in the lower part of the back in which situation it is of a greater significance in a doubtful case.

There are two further points of practical importance in the elucidation of this sign :—

1. The limitation of movement in meningitis is clearly involuntary, and this may be shown in distinction from voluntary or hysterical limitation by the fact that the amount of extension achieved is always the same in three or four successive attempts.

2. It is always bilateral, in distinction, for instance, from an acute unilateral lesion such as sciatica.

Stiffness of the neck and Kernig's sign should be looked for in every case of undiagnosed pyrexia of acute origin where there is any likelihood of epidemic cerebro-spinal fever, a procedure which may often lead to a good diagnosis and besides teaches one the limits of the normal.

The plantar reflex should also be examined. I have not seen it extensor until such time as the illness could be diagnosed on other signs, but it is useful confirmation.

Alimentary System.—After the first 24 hours the tongue becomes furred and the mouth dirty to a degree which is unusual in a simple "coryza" or "influenza." The pharynx and fauces are frequently injected and covered with sticky mucus.

Respiratory System.—Except for the exclusion of pneumonia, there is nothing to be gained from this system in the diagnosis.

Genito-urinary System.—Several cases have been reported in which sugar has been found in the urine early in the disease, and I have seen one case in which the patient, being admitted comatose, the presence of glycosuria tended to lead one astray.

Differential Diagnosis.—The infection most likely to simulate cerebro-spinal fever is pneumonia with a meningeal onset. I have performed lumbar puncture on one or two such cases, and found clear fluid under pressure, the operation being followed by some relief of their symptoms of meningitis. Signs in the lungs subsequently appeared.

A septic meningitis, *i.e.*, pneumococcal or streptococcal, is clinically indistinguishable. Tuberculous meningitis may also be difficult to distinguish at first from the less rapidly advancing type of cerebro-spinal.

Lumbar puncture.—The diagnosis can often be made without lumbar puncture and the patient despatched at once to Isolation Hospital. But for the benefit of the M.O. who may be in charge of an observation ward at a hospital, there are one or two points worth mentioning in connection with this operation.

1. Get an orderly to approximate the patient's chin to his knees so as to make the lumbar spine convex towards you. You will incidentally discover whether a general anæsthetic is necessary or not.

2. Do not freeze the skin with ethyl-chloride unless the patient is very apprehensive. The hardened skin prevents accurate localisation by the finger tip of the exact spot at which to insert the needle.

3. The fourth lumbar space having been found by means of a line drawn between the iliac crests, the *centre* of the space above this is the easiest site for puncture rather than a spot to one side. The needle is then thrust straight in rather forcibly through the skin, and then more slowly until resistance is met. If this resistance feels bony it is of no use to go on pushing; you will only blunt your needle. Withdraw it a little, alter the direction a shade and try again until you meet the right sort of resistance. I can only describe it as a "crunching sensation." Now thrust your needle through the ligament, but with a restraining hand. If you ram it home too hard you are apt to prick

a vessel and so get a blood-stained fluid which obscures the diagnosis.

In an early case of cerebro-spinal fever, such as we are considering, the fluid may already be purulent or turbid, or, on standing a few minutes, may show a distinct fibroid clot; if so, the diagnosis is practically settled, cerebro-spinal being so much the most common form of meningitis amongst troops.

It is worth remembering, however, that very early in the disease meningococci may be found in the fluid, which is quite clear to the naked eye, and contains no pus, so that if there is any doubt, it is worth sending the specimen to a bacteriologist.

In any case in which a Medical Officer has enough suspicion of cerebro-spinal fever to lead him to perform lumbar puncture, he should have a supply of at least 30 c.c. of the specific anti-serum ready to hand, together with a suitable syringe.

For the first injection it is best not to put in more serum than the amount of fluid one has drawn off, and if one can draw off 40 c.c. of fluid and inject 30 c.c. of serum in its place, so much the better. The serum should be stood in water at about body temperature for a few minutes before use.

With the despatch of the case to Isolation Hospital, the Medical Officer's duties to the patient are at an end, and it is now his business to conform with the various regulations concerning the disposal of contacts; with which it is not my purpose to deal.

C. P. SYMONDS, M.R.C.P.

Pass List.

Society of Apothecaries of London.

Final Examination.

At the Examination held recently, B. Ramirez was approved in Surgery (Section I.), Medicine (Section II.), and Forensic Medicine.

Leaves from a Surgical Note Book.

This series of articles, for which no claim to originality is made, are published in the hope that they may be useful, especially at the present time, to men reading for examinations.

Notes on Carcinoma of the Pylorus.

Pathology.

Carcinoma of the pylorus is most common in men between the ages of 40 and 70. Surgeons say that gastric ulcer predisposes to the development of cancer; physicians doubt this. Statistics collected in the Mayo Clinic showed that cancer had developed on a pre-existing ulcer in over 60 per cent. of cases. Moreover, chronic gastric ulcer and carcinoma are commoner in men than in women and have their usual seat in the same part of the stomach.

Carcinoma may be primary in the stomach or secondary; the latter is of little surgical importance and will not be considered. Primary carcinoma may be spheroidal or cylindrical celled, and in either variety colloid degenera- may be found. Colloid change also occurs in secondary deposits in the omentum, etc. If the fibrous stroma is abundant, the growth is known as a scirrhus; if small, as a medullary or encephaloid carcinoma. The spheroidal celled variety is commoner than the cylindrical celled and is the usual type of malignant ulcer with hard everted edges, indurated and infiltrating. Colloid change is not common.

Nearly 50 per cent. of gastric cancers occur in the pyloric region. They commence in the deeper layers of the mucous membrane or in the edge of an ulcer. The growth spreads directly in the stomach or adjacent organs, immediately or through adhesions, and indirectly by the lymphatics. The lymphatic spread is along the lesser curvature, very rarely to the

duodenum (this contrasts with sarcoma which always spreads to the duodenum). The growth spreads early and widely into the submucosa beyond the area of infiltrated mucous membrane, the serous and muscular coats being less involved. The pancreas, liver, and colon may be directly affected; there may also be direct spread to the abdominal wall if the growth becomes adherent; this may, perhaps, cause gastric fistula. The lymphatic spread is along the lesser curvature to the lower coronary glands, occasionally to the upper coronary set; later the subpyloric glands, subpancreatic and even the biliary chain are involved. The growth also spreads into the great omentum along the right gastro-epiploic artery. There are a few glands along the greater curvature. Lymphatic invasion is early and constant, and is present in nearly every case at operation. Finally, the hilum of the liver, cœliac axis, superior mesenteric, biliary, mesocolic, and lumbar glands are involved, and secondary deposits appear in the liver. The left supraclavicular and more rarely the right group are involved in some cases.

Pyloric cancer tends to infect the liver by direct spread and by the portal vein. Rarely, dissemination by the systemic veins through the inferior vena cava or via the thoracic duct may occur. Occasionally a nodule of growth appears at the umbilicus, perhaps due to spread along the ligamentum teres of liver. Sometimes scattered growths in the skin appear all over the body. Secondary malignant peritonitis also occurs, *e.g.*, secondary growths in the ovary or a mass in the pouch of Douglas.

Symptoms and Differential Diagnosis.

In carcinoma of the pylorus obstructive symptoms usually appear early. The majority of the cases may be conveniently classified into one of three groups :—

1. *Those following previous gastric disease.*

There is a history of chronic gastric ulcer attacks, at irregular intervals, of pain after food, perhaps relieved by vomiting. In later attacks the pain is not so readily relieved by vomiting or rest; it becomes constant or gnawing in character and wakes the patient at night. A distaste for food, especially meat, may arise. In some cases there is no change in the history and carcinoma is found where chronic ulcer was suspected. There may be a history of gastric ulcer several years before with a long interval of apparently perfect recovery.

2. *Cases occurring in previously healthy persons.*

There may be an acute hæmatemesis succeeded by gastric discomfort. As a rule the onset is gradual. The pain is not so sharp or so localised as in an ulcer, often not relieved when the stomach is empty or by rest.

Vomiting.—This may be the first symptom. Blood is always present, either "occult" or "coffee-ground" vomit. A palpable tumour is present in more than half the cases, but this is a late sign. The tumour may be in any part of the abdomen and must be distinguished from tumours of the gall-bladder and colon. Inflation of the stomach with gas readily distinguishes pyloric growth. Visible gastric peristalsis and a dilated stomach may be present. Metastases may appear at the umbilicus.

Anæmia.—Present in advanced cases. The blood changes are those of a secondary anæmia (compare with pernicious anæmia).

Loss of weight.—Rarely the first sign of the disease.

Changes in gastric secretion.—Years ago Golding-Bird showed that free hydrochloric acid is absent in cases of carcinoma of the stomach. This is a late sign due to co-existent chronic gastritis. Free hydrochloric acid is usually present in cases with a long history of gastric trouble.

Microscopical examination of the vomit may reveal fragments of growth, blood, sarcinæ, and the other Oppler-Boas bacillus.

3. *Latent cases.*

In these the patient presents himself for loss of weight, a tumour, ascites, metastases of the liver, or malignant ovarian tumour.

Acute perforation is rare, subacute perforation with perigastric abscess more common. Fistulæ may open into the colon or duodenum. Jaundice may be due to the growth involving the head of the pancreas.

Diagnosis.

It may be impossible to make a certain diagnosis at the period most favourable for removal of the growth, because all the positive signs of growth are late signs. Hill's gastroscope may be employed.

Treatment.

The treatment of suspected carcinoma is surgical. No time must be wasted. If symptoms of chronic indigestion appear after the age of 40, organic disease of the stomach should be suspected, and, if a comparatively short period of medical treatment does not effect a cure, it may be quite justifiable to open the abdomen. If this advice were acted upon, many cases would be operated on in the precancerous stage, and the ultimate results would be more favourable. Under 20 per cent. of cases are found suitable for resection at operation.

Operation should be undertaken in all suspected and proved cases, unless obviously inoperable by reason of secondary growths, the surgeon being prepared to do a gastrectomy. Simple gastro-jejunostomy should be performed when the growth is producing pyloric obstruction. The incision is made through the right rectus and the stomach is examined. If in doubt as to malignancy, a piece is removed for section and a gastro-jejunostomy performed.

In cancer of the pylorus the peritoneum is thickened, and opaque shaggy red peritoneum with the depressed scar of an ulcer is rarely seen.

Is the Growth Operable?

The answer to this question depends on the degree of adhesion and the infiltration of other structures, particularly the liver and pancreas, of massive glandular enlargements, of secondary deposits in the peritoneum and other viscera at a distance.

If in doubt do a gastro-jejunostomy and then a partial gastrectomy two weeks later. The part removed is the stomach from the pylorus, including the commencement of the duodenum, to the Hartmann-Mikulicz line, *i.e.*, the line joining the right of the cardiac orifice to the corresponding point on the greater curvature.

The immediate mortality is 25 per cent.; 60 per cent. of those who recover will succumb to the disease within three years, and 15 per cent. will live over five years.

W. E. T.

Change of Address.

Lieut.-Colonel O. J. Currie, S.A.M.C., S.M.O. Cantonments, Potchefstrom.

J. Sefton Sewill, L.D.S. Eng., from 9a, Cavendish Square, to 12, Chandos Street, Cavendish Square, W.

Major Brooke Churchill, R.A.M.C., Surgical Specialist, 18th Stationary Hospital, Salonika.

Captain L. T. Dean, R.A.M.C., Army Base Post Office, Dares Salaam, E. Africa.

Surgeon H. Corry-Mann, M.D., R.N., from H.M.S. *Duncan* to Medical Officers' Mess, Royal Naval Hospital, Bighi, Malta.

Lieut. H. F. Stephens, R.A.M.C., from the Royal Earlswood Institution, Redhill, Surrey, to c/o Messrs. Holt & Co., 3, Whitehall Place, London, S.W.

Capt. E. Seymour Price, O.C. 3/6th London Field Ambulance, from Kingston-on-Thames, to Salonika.

Periodicals received.

The Journal of the National Dental Association, The Samaritan Magazine, The Hospital, The Nursing Times, London Hospital Gazette, The Manchester University Magazine, The Otago University Review, St. Bartholomew's Hospital Gazette.

GUY'S HOSPITAL ROLL OF WAR SERVICE.

2.—Nursing Staff.

Adams, Ethel L. ... ... Civil Hosp. Reserve, B.E.F., since 1915.
Aitken, J. ... ... Lady Superintendent, V.A.D. Hosp., Watford, to February, 1915.
Allan, M. C. ... ... Q.A.I.M.N.S. Reserve. The War Hospital, Dartford, since July, 1916.
Allcock, Annie ... ... B.R.C.S. Hospital, England.
Allen, G. M. ... ... Acting Matron, Q.A.I.M.N.S. since 1915, B.E.F.
Ames, I. ... ... Civil Hosp. Reserve, Salonika E.F., since 1915
Anson, Lucy ... ... Matron, Red Cross Hospital, Portal, Tarporley, Cheshire.
Atkey, M. ... ... Sister, Military Hospital, Dulwich.

Baker, E. C. ... ... Civil Hosp. Reserve, Salonika E.F., since 1915.
Ball, Marjorie ... ... Sister, Military Wards, Winchester.
Ballance, M. E. ... ... T.F.N.S., 1st Southern General Hosp., Birmingham, since 1915
Ballantyne, J. F. ... ... Matron, Fulham Infirmary.
Banbury, H. M. ... ... Sister, Civil Hosp. Reserve, B.E.F., since 1915.
Barber, Ethel M. (née Howlett) ... Red Cross Hosp., Derby.
Barker, C. E. ... ... Civil Hosp. Reserve, B.E.F., since November, 1914.
Barker, Mary ... ... Sister, St. John's Hosp., Hastings since July, 1916, B.R.C. Soc.
Bartlett, M. E. ... ... Matron, Millicent, Duchess of Sutherland's Hospital, Dunkirk, to June, 1915.
Batley, E. A. ... ... Q.A.I.M.N.S. Reserve since 1915, Gibraltar.
Beard, A. M. ... ... War Hosp., Purley.
Beardshaw, M. F. ... ... Sister, Civil Hosp. Reserve, B.E.F., since 1914.
Bedwell, Laura ... ... Sister-in-Charge, Rushton Hall Military Hosp. to 1916.
Beesley, A. M. ... ... Civil Hosp. Reserve, B.E.F., since July, 1915.
Bell, M. H. ... ... Staff Nurse, Lady Evelyn Mason's Hosp., to July, 1915.
Beloe, Ethel ... ... Matron, Q.A.I.M.N.S. Reserve. The Military Hospital, Herne Bay, June, 1915. R.R.C., 2nd Class, 1917.
Bishop, E. (née Yeates) ... ... Sister, Red Cross Hospital, Frome, winter 1914-1915.
Blott, Alice M. ... ... Sister, Queen Mary's Royal Naval Hosp., Southend-on-Sea, since October, 1914. R.R.C., 2nd Class.
Blyth, Ruby ... ... Sister, Government Hosp., Mombasa, British East Africa, since November, 1915.
Bodenham, E. M. ... ... Q.A.I.M.N.S. Reserve. Amesbury, since November, 1915.
Bollard, Mary ... ... Sister, Kasr-el-Aini Hosp., Cairo, since November, 1914.
Boniface, N. ... ... Q.A.I.M.N.S. Reserve. B.E.F. since May, 1916.
Bott, Edith Elton ... ... Sister, Q.A.I.M.N.S. Reserve. Military Hosp., Fovant, Salisbury. since October, 1915, M.E.F.
Bottomley, C. M. ... ... Q.A.I.M.N.S. Reserve. Amara, Mesopotamia.
Bourdillon, Mary ... ... Sister, Civil Hosp. Reserve, B.E.F., since August, 1914.
Bowder, E. F. ... ... Civil Hosp. Reserve, B.E.F., to December, 1915.
Boys, A. ... ... Sister, Duchess of Sutherland's Hosp., Calais, since February, 1916.
Brakspear, D. (née Drew) ... ... Sister, Lady Mary Meynall's Hosp., Lennox Gardens, to September, 1915.
Brennand, F. ... ... Civil Hosp. Reserve, B.E.F., since 1915.
Brereton, F. M. (Mrs.) ... ... Matron, Swanton House Red Cross Hosp., Melton Constable, since November, 1915.
Bridges, Annie ... ... Sister, Red Cross Hosp., Lincoln.
Brierley, A. T. ... ... Temporary Sister-in-Charge, Hôpital Anglo-Belge, St. Aubin, 1915.
Britton, C. ... ... Superintendent, V.A.D. Hosp., Lutterworth. Appointed 1915.
Brooks, F. J. ... ... Sister, Queen Mary's Royal Naval Hospital, Southend-onSea, to August, 1915.
Broome, F. ... ... Civil Hosp. Reserve, B.E.F., since July, 1915.
Brown, Emily Seaman ... ... Nurse, Private Munition Factory, to 1916.
Brown, F. E. ... ... Sister, Urgency Cases Hosp., Revigney Meuse, France, to Oct., 1916.
Brown, Frances L. ... ... Sister, The Anglo-American Hosp., Wimereux, since November, 1914.

Brown, Jessie	Sister, Kasr-el-Aini Hosp., Cairo, since July, 1916.
Brown, K. (née Proctor)	Sister, B.R.C.S. Hospital, Heaton Chapel.
Brown, Mildred	Sister, Civil Hosp. Reserve, since August, 1914, B.E.F.
Browne, Annie	Q.A.I.M.N.S. Reserve. Since Jan., 1916, Prees Heath Camp, Whitchurch.
Browning, G.	Sister, Queen Mary's Royal Naval Hosp., Southend-on-Sea, since 1915.
Browning, L. C.	Q.A.I.M.N.S. Reserve. H.M.H.S. "Salta" to 1916.
Bruce, H.	Theatre Sister, Bermondsey Military Hosp., Ladywell, S.E.
Bryan, M.	Matron, General Hosp., Northampton, to 1916.
Bryan, W. R. (Mrs.), late Pallett	Massage Sister, Military Hosp., Norwich, November, 1915, to November, 1916.
Burdett, Mary	Sister-in-Charge, Medical Stores, B.R.C.S., Empress Club, Dover Street, W.
Bryne, J.	Sister, B.R.C.S. Hosp., Geiza, Egypt.
Cadell, K.	Sister, St. John's Ambulance Brigade Hosp., Etaples, to July, 1916.
Campbell, M. W.	Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
Cannell, S.	King George's Hosp., Stamford Street, to August, 1916.
Canty, C.	Sister, Sussex Lodge, Regent's Park.
Carey, D.	5th Northern General Hosp., Leicester, since May, 1915.
Carey, M.	Q.A.I.M.N.S. Reserve. Home Service.
Carpenter, A. M.	Sister, Sussex Lodge Officers' Hosp.
Carpenter, M.	Sister, Red Cross Hosp., Crayford, Borstal Heath, 1915.
Carter, E. M.	Q.A.I.M.N.S. Reserve. B.E.F. of Salonika Army since 1914.
Cheetham, E.	Matron, Q.A.I.M.N.S. R.R.C. (1st Class), January, 1917.
Charlesworth, B.	British Red Cross.
Cherry, E.	Civil Hosp. Reserve. B.E.F., France, since November, 1916.
Chisolm, Alice (née Naylor)	Matron, West Ham House, Basingstoke, B.R.C. Hosp.
Chittock, M. A.	Assistant Matron, St. John Ambulance Brigade Hosp., Etaples.
Clarke, M. (née Crocker)	Q.A.I.M.N.S. Reserve. King George's Hosp., Stamford Street. R.R.C. (2nd Class), 1917.
Clutton, K. E.	Sister, Streatham Red Cross Hosp., since April, 1916.
Coleclough, Annie	Matron, V.A.D. Hosp., Quex Park, Birchington, since November 8th, 1915.
Collie, I.	Sister-in-Charge, Military Wards, Romford, to April, 1916.
Collins, E.	Q.A.I.M.N.S. Reserve since 1916.
Colston, M.	Q.A.I.M.N.S. Reserve. B.E.F. since 1914.
Connolly, Norah	Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
Cook, Marion	Huddersfield War Hosp. since October, 1915. R.R.C. (2nd Class), 1917.
Corbishley, M. C.	Acting-Sister, Q.A.I.M.N.S., France, since August, 1914. R.R.C. (1st Class), 1915.
Corder, Grace	Acting-Matron, Q.A.I.M.N.S. Reserve. Mansel Hosp., Malta, 1917.
Cornell, G.	War Hosp., Norwich.
Cornwell, Lucy	Civil Hosp. Reserve, B.E.F., since April, 1915.
Coward, A. I.	Sister, T.F.N.S., B.E.F., since March, 1915.
Cox, E. M.	Civil Hosp Reserve, B.E F., since 1916.
Crisford, R.	Q.A.I.M.N.S. Reserve. Salonika since June, 1916.
Custance, G. E.	Q.A.I.M.N.S. Reserve. B.E.F. since April, 1915.
Cuthbert, A. M.	Sister, Harbourne Hall Auxiliary Hosp., Birmingham, since October, 1916.
Dale, Catherine	Q.A.I.M.N.S. Reserve. B.E.F. since July, 1915.
Daniels, A. M.	Civil Hosp. Reserve since November, 1914.
Daniels, B. H.	Sister, Civil Hosp. Reserve, B.E.F., since November, 1915.
Davidson, Amy E.	Matron, Gravesend Hosp.
Davidson, L. M. (née Tippetts)	Q.A.I.M.N.S. for India. Sister, H.M.H.S. "Takada," Bombay.
Davis, E. A.	Nurse, Munition Factory, Hayes.
Davis, F. L.	Sister, V.A.D. Hosp., Gloucester.
Davis, Mabel	Acting-Matron, Q.A.I.M.N.S., France, since 1915.
Dean, A. E.	Sister, Mrs. Bellville's Hosp., Queen Anne Street, since 1916.
Denney, H.	Sister, Arc En Barrois Hosp., France, to June, 1916.

Densham, Evelyn	Matron, The Furnes Hosp. for Officers, Harrogate. R.R.C. (2nd Class), January, 1917.
Denton, L.	Sister-in-Charge, B.R.C. Hosp., Normanby Park, Doncaster, since November, 1914.
Dibblin, I. E.	Military Hospital, Lakenham, Norwich, 1915.
Dingle, J.	Sister, Sussex Lodge Officers' Hosp.
Dixon, M. S.	Civil Hosp. Reserve. H.M.H.S. "Acquitania" since December, 1916.
Dodds, F. M.	Civil Hosp. Reserve, M.E.F., to 1916.
Dodson, M. A.	Civil Hosp. Reserve since 1914, B.E.F.
Dottridge, S. C.	Sister, Fulham Military Hosp., to 1915.
Douglas, M.	Civil Hosp. Reserve, B.E.F., since 1914.
Dowley, J.	Sister, 4th London General Hosp., Denmark Hill.
Drower, V. F.	Sister, B.R.C. Hosp., Weir House, Balham, since May, 1915.
Druce, C. E.	Civil Hosp. Reserve, B.E.F., since August, 1914.
Eagle, M. J.	Nursing in France, 1914 and 1915.
Eaton, E. A. G.	Q.A.I.M.N.S. Reserve since August, 1915. Military Hosp., Farnham.
Edmonds, F.	T.F.N.S., B.E.F. Home Service since February, 1915.
Edwards, B.	Civil Hosp. Reserve, January, 1917, H.S. "Neuralia."
Ellis, S.	Sister-in-Charge, Burcote Hosp., to 1916.
Elphick, M.	Sister, King Manoel's Home for Officers, Brighton, 1915.
Evans, E. G.	Civil Hosp. Reserve. H.M.H.S. "Acquitania" since December, 1916.
Evans, W.	Civil Hosp. Reserve, B.E.F., since November, 1914.
Exshaw, P.	Q.A.I.M.N.S. for India. Sister, Indian E.F., France and Mesopotamia, 1914 and 1915.
Farah, A.	Q.A.I.M.N.S. Reserve. Indian E.F. since May, 1916.
Farr, A.	Civil Hosp. Reserve, B.E.F., 1916.
Farrar, A. E.	Working with X-ray Ambulance in Italy.
Fawcus, D. (née Stewart)	Military Service in France.
Ferdinand, M. J.	Sister, Queen Mary's Royal Naval Hosp., Southend-on-Sea, since October, 1915.
Field, Grace	Sister, Red Cross Hosp., Ongar, since October, 1914.
Finlow, A. B.	Civil Hosp. Reserve, Malta, since 1915.
Finnemore, K. E.	Matron, H.M. Queen Mary's Royal Naval Hosp., Southend-on-Sea.
Finnis, F. M.	Sister, Q.A.I.M.N.S. Reserve. B.E.F. since August, 1914.
Fisher, M. C.	Interviewing Matron to Joint Committee, Devonshire House, since 1915.
Fletcher, A. M.	Sister, Centre Radiologique, 13th Region, Vichy, since October, 1916.
Fletcher, E. de V.	Sister, Graylingwell War Hosp., Chichester, since May, 1915.
Fletcher, E.	Sister, Hôpital Irlandais, France, to March, 1916.
Fletcher, G. H.	Sister-in-Charge, Hôpital Irlandais, France, to January, 1916.
Foley, Mary	Sister, Sussex Lodge Hosp. for Officers to 1915, and Fishmongers' Hall Hosp. to 1916.
Foord-Kelcey, M.	Civil Hosp. Reserve, Military Hosp., Netley, since September, 1915.
Ford, F. E.	Sister, B.R.C. Hosp., B.E.F., France, since 1915.
Ford, E.	Sussex Lodge Hospital for Officers to March, 1915.
Fox, E. M.	Matron-in-Charge, Nursing Unit, Serbia, 1916.
Fox, Louisa	Q.A.I.M.N.S. Reserve. Egypt since 1915.
Foxon, Jessie	Q.A.I.M.N.S. Reserve. Salonica E.F. since 1915.
Foxon, M. E.	Civil Hosp. Reserve, Malta, since September, 1915.
Frank, G.	Civil Hosp. Reserve, Malta, and B.E.F. since 1915.
Fraser, E.	Sister, Civil Hosp. Reserve, B.E.F., since August, 1914.
Fraser, M.	Sister, Queen Mary's R.N. Hosp., Southend-on-Sea, since July, 1915.
French, E. M.	Q.A.I.M.N.S. Reserve. H.M.H.S. "Panama" since Sept., 1916.
Freshney, F. H.	Sister, South African Army Nursing Service, since October, 1915.
Freshney, M. D.	Nursing Sister, R.N.S.R., R.N. Hosp., Chatham.
Galavan, M.	Sister, B.R.C. Hosp. for Officers, Brighton, since April, 1916.

Gallagher, A.	Sister, Queen Mary's Royal Naval Hosp., Southend-on-Sea, since February, 1916.
Gerrard, C.	Q.A.I.M.N.S. Reserve. B.E.F. since March, 1916.
Gibson, S. J.	Civil Hosp. Reserve, B.E.F.; Acting-Sister, Ambulance Train.
Gill, E. R.	Military Hosp., Southmead, Bristol, T.F.N.S., since October, 1914.
Gladstone, E. M.	Civil Hosp. Reserve, B.E.F., since August, 1915.
Good, A. C.	B.R.C. Hospital.
Goodchild, M. E.	Civil Hosp. Reserve, B.E.F., since November, 1914.
Gooderham, E. M. H.	Sister-in-Charge, Mrs. Hall Walker's Hosp. for Officers, Sussex Lodge, since 1915.
Gordon, A.	Sister-in-Charge, V.A.D. Hosp., Pucklechurch, Glos.
Goss, E. M.	Red Cross Hosp., Gloucester.
Gossage, K.	Matron and Night Sister, B.R.C. Hosps., 1915 to 1916.
Goucher, Alice	Bombay Presidency General Hosp., Indian E.F., Alexandria. Sister since 1915.
Goule, Kate (née Fairlie)	Lady Supt., 14th Detachment, V.A.D., and Red Cross, Warwickshire.
Gower, D.	Civil Hosp. Reserve, B.E.F., since August, 1915.
Graham, E. G.	Matron, General Hosp., Weston-super-Mare.
Grant, E. A.	King George's Hosp., Stamford Street, since May, 1915
Gray, K.	Sister, Burcote Private Hosp.
Gray, M. L.	Q.A.I.M.N.S., King George V. Hosp., Dublin., since April, 1916.
Gregg, B. M.	Civil Hosp. Reserve, Indian E.F. since 1916.
Groom, E. R.	Sister, Military Hosp., Lewisham, since September, 1915.
Grundy, D. (née Ball)	Civil Hosp. Reserve, B.E.F., since November, 1914.
Gwilliam, M.	Sister, B.R.C. Hosp., Boulogne, to September, 1916.
Halfacre, M. F.	T.N.F.S. Staff-Nurse, No. 3 London General Hosp., to November, 1914.
Hall, Fannie	Q.A.I.M.N.S. Reserve. King George's Hosp., Stamford Street, since 1915.
Hampson, A. M.	Sister, Kasr-el-Aini Hosp., Cairo, since October, 1916.
Hancock, C. M.	Day Sister and Masseuse, Foye House Hosp., nr. Bristol, since September, 1915.
Hanmer, M.	Sister, Royal Herbert Hosp., Woolwich, November, 1914, to May, 1915.
Harden, G.	T.F.N.S., London General Hospital No. 2, Chelsea, since 1915.
Harding, A.	Sister, Queen Mary's R.N. Hosp., Southend-on-Sea, since February, 1916.
Harris, K. B.	Q.A.I.M.N.S. Reserve. Royal Herbert Hosp., Woolwich, since September, 1915.
Hart, Alice	Sister, Q.A.I.M.N.S. for India.
Haughton, L. V.	Member of Nursing Board, Q.A.I.M.N.S., War Office. Royal Red Cross (1st Class), 1917.
Haward, G. (née Tyers)	Red Cross Nursing, Chesterfield Gardens, London, December 1914. to April, 1915.
Hawkins, M.	Nursing in B.R.C. Hosps. since 1914.
Hayne, K.	Civil Hosp. Reserve, B.E.F., since July, 1915.
Hayne, M.	Civil Hosp. Reserve, B.E.F., since March, 1916.
Haynes, E. B.	V.A.D. Nurse, Auxiliary Hosp., Stockport, since May, 1915.
Haynes, W. B.	Assistant Dispenser, Colchester Military Hosp., since March, 1916
Hayter, A.	Civil Hosp. Reserve, M.E.F., October, 1915, to November, 1916.
Healy, Mary (née Sutton) ...	Matron, Voluntary Red Cross Hosp., Basutoland, 1916.
Heath, Edith	B.R.C. Hosp., England.
Hepburn, F. M.	Civil Hosp. Reserve. Sister, B.E.F., since October, 1914.
Hickling, M. V.	Civil Hosp. Reserve, November, 1916.
Hickman, K. L.	Civil Hosp. Reserve. B.E.F. Sister since August, 1914
Hiles, S. N. B.	Civil Hosp. Reserve. B.E.F. since November, 1915.
Hill, Mrs. Ina F.	Sister, Duchess of Westminster's Hosp., Le Toquet, 1914.
Hilliard, M.	Sister, Civil Hosp. Reserve, B.E.F., since April, 1915.
Hills, J.	Matron, Wigmore Isolation Hosp., Chatham, for Military and Civil Patients.
Hobhouse, M. E.	Q.A.I.M.N.S. Reserve. Sister, Military Hosp., Devonport, since September, 1914. Royal Red Cross (2nd Class), 1917.

Hockin G.	Civil Hosp. Reserve,Indian E.F., since May, 1916.
Hodgson, L. (née Reed)	Matron, Red Cross Hosp., Worsley Hall, Lancs.
Holman, B. A.	Sister, Red Cross Hosp., Eastbourne, 1915.
Hooper, A.	Matron, No. 5 Military Hosp., Exeter.
Hope, B. A.	Matron, Military Hosp., Bramley, Surrey, since April. 1915. R.R.C. (2nd Class), 1916.
Hope, E.	Sister, Queen Mary's R.N. Hosp., Southend-on-Sea.
Horton, E.	T.F.N.S., Salonika E.F., July, 1916.
Hughes, J. E.	Anglo-French Hosp., Nevers. Sister since 1915.
Hulbert, A.	Sister, King George's Hosp., Stamford Street, since May, 1915.
Humphreys, M. L.	Civil Hosp. Reserve, M.E.F., since October, 1915.
Hurlbatt, E.	Matron, Roseneath V.A.D. Hosp., to April, 1915.
Hutchinson, E.	Q.A.I.M.N.S. Reserve. War Hosp., Dartford, since 1915.
Hyland, S. A.	Matron, Devonshire Hosp., Buxton.
Illingworth, M.	Sister, French Military Hosp., Dinard, to November, 1915.
Jackson, M.	Civil Hosp. Reserve. H.M.H.S. "Acquitania," since Nov., 1916.
Jenkins, Lily	Sister, Q.A.I.M.N.S. Reserve. B.E.F. since August, 1914.
Jickling, E. M.	Sister, Civil Hosp. Reserve, B.E.F., since August, 1914.
Johnson, E.	Civil Hosp. Reserve, B.E.F., since November, 1915.
Johnston, Mabel de H. (née de Carteret)	Q.A.I.M.N.S.R. B.E.F. to 1916.
Jolley, L. E.	Matron, Q.A.I.M.N.S. Reserve. Marseilles Sta. Hosp. since August, 1916. R.R.C. (2nd Class).
Jones, Amy	Sister-in-Charge, Mostyn Convalescent Home for Wounded Soldiers, Holywell
Jones, Annette	Matron, Aux. Hosp., nr. Tunbridge Wells.
Jones, Marie A.	Civil Hosp. Reserve, Cambridge Hosp., Aldershot, since August, 1916.
Jones, Mary E.	Assistant-Matron, Hampstead Military Hosp., since August, 1915.
Jones, W. (née Ferry)	Matron, Trafford Park Aux. Hosp., Manchester, since June, 1915
Jones, W. M.	Civil Hosp. Reserve, M.E.F., since September, 1916.
Jordan, M.	Civil Hosp. Reserve. H.M.H.S. "Acquitania" since November, 1916.
Keeble, Ida	Nursing-Sister, Q.A.I.M.N.S. for India, Bombay, since October, 1916.
Kennedy, A.	Sister, Grayshott Military Hosp., Hindhead.
Kew, E. C.	Matron, Aux. Hosp., Moorfield, Glossop, to June, 1916.
Kiddle, V. N.	Civil Hosp. Reserve. Sister, Salonika E.F. since February, 1916. R.R.C. (1st Class), 1915.
Killpack, A. (née Gimson) ...	Matron, V.A.D. Hosp., Hayward's Heath, since November, 1914.
King, D.	Civil Hosp. Reserve, B.E.F., since May, 1915.
Knight-Law, E. J.	Sister, Massage and Electrical Dept., Aux. Military Hosp., Uppingham, to August, 1916.
Krauth, C.	Sister, St. Andrew's Hosp., Dollis Hill, since February, 1916.
Lane, Ella	Sister-in-Charge, Regent's Park Military Hosp., Southampton, to November, 1915.
Latham, E. M.	Sister, Queen Mary's R.N. Hosp. since 1915.
Laveleye, Marie de	Sister, Centre Radiologique, 13th Region, Vichy, since October, 1916.
Lay, J. H.	Red Cross Hosp., Steventon.
Layng, A.	Head Sister, Spilsby Red Cross Hosp. since October, 1914.
Layton, H.	Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
Leach, G.	Sister, Grayshott Military Hosp., since 1915.
Lear, E. M.	Sister, Civil Hosp. Reserve, since November, 1915.
Lee, F. M.	Nursing in Belgium to October, 1914.
Leedham, E.	Sister, Romford Military Hosp., August, 1915, to April, 1916.
Le Febvre, J.	Military Nursing in France.
Leggoe, Ruth	Sister, QA.I.M.N.S. Reserve. Brockenhurst since October, 1915.
Leigh, L. F.	Sister, Q.A.I.M.N.S. Reserve. Military Hosp., Pembroke Dock, since January, 1916.
Leng, Minnie	Sister, Q.A.I.M.N.S. Reserve. Egypt since July, 1915.

Leslie, E. M.	Sister, Q.A.I.M.N.S. Reserve. Malta since 1915.
Lewin, Jessie	Sister-in-Charge, V.A.D. Hosp., St. Albans, to September, 1916.
Lithgow, A. M.	Civil Hosp. Reserve, B.E.F., since 1915
Lloyd, A.	Sister, American Hosp. for English Soldiers, Highgate, since November, 1915.
Loughnan, M.	Q.A.I.M.N.S. Reserve. Military Hosp., Brockenhurst, since April, 1916.
Lowe, A. R.	Sister, Q.A.I.M.N.S. for India, 1915. Amara, Mesopotamia. Royal Red Cross (2nd Class), 1916.
Luckin-Smith, W.	Sister, B.R.C. Hosp., Boulogne, since October, 1916.
Lüders, V.	Member of 4th Serbian Relief Fund Unit. British Farmers' Hosp., 1914-1915.
Lulham, E. V.	Sister, Q.A.I.M.N.S. Reserve. Egypt and Mesopotamia since 1915.
Lulham, G.	Sister, T.F.N.S., 3rd General Hosp., Oxford, since 1914.
Lustic, C. E.	Q.A.I.M.N.S. Reserve. Royal Herbert Hosp. since 1914.
Lyndon, C. (née Charleton) ...	Commandant, Grayshott Military Hosp., 1914.
Lyons, Margaret, J.	Sister, Q.A.I.M.N.S. Reserve. B.E.F. since August, 1914. R.R.C. 2nd Class), 1916.
Mackenzie, K.	Civil Hosp. Reserve, B.E.F., since May, 1915.
Macmanus, E.	Civil Hosp. Reserve, B.E.F., since August, 1915.
Macreath, A.	Sister, 2nd Eastern Hosp., Brighton, since 1914.
Macrone, M.	Civil Hosp. Reserve, B.E.F., since February, 1916.
Maddison, M.	Civil Hosp. Reserve, B.E.F., since 1915.
Malkin, F.	Massage Sister, Grayshott Military Hosp., since 1914.
Mallandaine, L. A.	Sister, Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
Mann, M.	Civil Hosp. Reserve, Military Hosp., Bournemouth.
Mannell, L. G.	Civil Hosp. Reserve, Salonika E.F., since July, 1916.
Mansfield, M.	Sister, Q.A.I.M.N.S. Reserve. University War Hosp., Southampton.
Marsh, M. E.	Sister, T.F.N.S. 3rd Southern General Hosp., Oxford. R.R.C. (2nd Class), 1917.
Marshall, H. O.	Civil Hosp. Reserve. H.M.H.S. "Neuralia."
Martin, B.	Civil Hosp. Reserve, Salonika E.F., since July, 1916.
Martyn, G.	Q.A.I.M.N.S. Reserve. Military Hosp., Cork, since March, 1916.
Masters, R. M.	Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
May, F. E.	Civil Hosp. Reserve. B.E.F.
McAra, A.	Civil Hosp. Reserve, B.E.F., 1914-1915.
McKay, C. A.	Matron, 4th Southern General Hosp. (T.F.), Plymouth, since August, 1914. Royal Red Cross (1st Class), 1916.
McLaren, M.	Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
McMorland, R.	Q.A.I.M.N.S. Reserve. H.M.H.S. "Nevada."
Medley, B.	Q.A.I.M.N.S. Reserve. H.M.H.S. "Grantully Castle.
Meehan, E. A.	Q.A.R.N.N.S. Reserve. Royal Naval Hosp., Chatham.
Messenger, C.	Q.A.I.M.N.S. Reserve. Royal Naval Hosp., Chatham, since May, 1916.
Messenger, L. (née Wood)	Sister, H.M. Queen Mary's R.N. Hosp., Southend-on-Sea, to November, 1915.
Middleton, M.	Sister, Hôpital Anglais, L'Ile Barbe, Rhône, since 1916.
Millar, M. B.	Sister, Mrs. Bellville's Hosp. for Officers, Queen Anne Street, since 1915.
Miller, A. M.	Matron, Hosp. for Officers, Berkeley Square, to July, 1916.
Millidge, E.	Red Cross Hosp., Dinard, France, to January, 1915.
Mitchell, M.	Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
Molesworth, W.	Sister, Duchess of Westminster's Hosp., Le Touquet, to September, 1916.
Moore, K. M.	Matron, Hosp., Arc-en-Barrois, France, since 1914.
Moore, N.	Sister, Civil Hosp. Reserve, Salonika Force, since 1916.
Morgan, F. A.	Sister, Q.A.I.M.N.S. Reserve, B.E.F., since 1914.
Morgan, M. T. (née Martin) ...	Matron, B.R.C. Hosp., Sketty, to March, 1916.
Moriarty, E.	Nursing-Sister, Q.A.I.M.N.S'. for India, since 1916.
Morley, S.	Sister, N.Z. Army Nursing Service. Egypt and England since December, 1915.

Morrall, K. L.	Sister, Wrest Park Military Hosp., Bedford, 1914.
Moss, Grace	Sister, Roseneath Military Hosp., to August, 1916.
Mullan, M. M.	Civil Hosp. Reserve, Indian E.F., since May, 1916.
Mulqueen, A. (née Jolliffe) ...	Service in France to July, 1915.
Mumford, M.	Commandant and Sister-in-Charge, Bevan Military Hosp., Sandgate, since October, 1914.
Murray, Jean	Sister, Sussex Lodge Hosp. for Officers, since March, 1916.
Mutford, A. S.	Q.A.I.M.N.S. Reserve since July, 1916. B.E.F.
Nawn, J.	Sister, Crescent War Hosp., Croydon, since September, 1915. R.R.C. (2nd Class), 1916.
Neale, W. (née Gillett)	Q.A.I.M.N.S. Reserve. Egypt, 1915 to 1916.
Nelson, M.	Civil Hosp. Reserve, B.E.F., since November, 1915.
Neville-Cox, W. (née Goddard) ...	Lady Superintendent, Preston Park V.A.D., 1915.
Newsome, G. (née Malonnek) ...	Sister-in-Charge, Sussex Lodge Officers' Hosp., to May, 1915.
Newton, E. M.	Matron, T.F.N.S., Alexandria, since 1915. R.R.C. (1st Class), 1916.
Noble, M.	Nursing-Sister, Q.A.R.N.N.S., since 1913.
Northey, P. W.	Q.A.I.M.N.S. Reserve, England, to July, 1916.
Nunn, A. B.	Acting-Matron, Q.A.I.M.N.S., 1907. Active Service, France, since August, 1914. R.R.C. (1st Class), January, 1917.
Nutt, M. A.	Acting Matron-in-Chief, South African M.N.S., since September, 1915. R.R.C., 1901.
O'Donnell, E.	Matron, V.A.D. Hosp., Lancs., to December, 1915.
O'Neill, M. E.	Q.A.I.M.N.S. Reserve. Matron, Military Families' Hosp., Chatham, since January, 1913.
Orchard, E. C.	Civil Hosp. Reserve since December, 1914, B.E.F.
O'Reilly, Mary	Sister, Norfolk War Hospital, Norwich, since 1914.
O'Rorke, E.	Q.A.I.M.N.S. Reserve. 3rd Southern General Hosp., Oxford.
Osborne, G.	Sister-in-Charge, Lady Evelyn Mason's Hosp., Bruton Street, since June, 1916.
Owen, M. R.	Civil Hosp. Reserve, B.E.F., since October, 1915.
Owens, M. J.	Sister, Civil Hosp. Reserve, Port Said, since 1915.
Pace, E.	Sister, Queen Mary's R.N. Hosp., Southend-on-Sea, since October, 1916.
Parkes, F.	Matron, Empress Eugéniè's Hosp., Farnborough.
Parsons, M.	Civil Hosp. Reserve. B.E.F., November, 1914, to September, 1916.
Paterson, J.	Sister, Civil Hosp. Reserve, Cambridge Hosp., Aldershot.
Payne, E. B. (née Wise)	Asst. Supt., Red Cross Hosp., Alton.
Peake, C. (née Fraser)	Relief-Sister, Auxiliary Military Hosp., Isleworth, since 1915.
Pearse, C.	Sister, Civil Hosp Reserve, No. 5 Reading War Hosp.
Pearson, C.	Sister, B.R.C. Convalescent Hosp., Montaza, Egypt, 1915.
Pearson, W.	T.F.N.S., 2nd North-Eastern General Hosp., Manchester.
Pettifer, W. (née Andrewes) ...	B.R.C.S., Matron, Hanover House, Woodford since May, 1915.
Phillips, Agnes M.	Civil Hosp. Reserve, B.E.F., since October, 1914.
Phillips, Alice M.	B.R.C. Hosps., Netley and France, since 1914.
Phillips, E. R.	Sister, Sussex Lodge Hosp. for Officers.
Pilkington, A. B.	Civil Hosp. Reserve, B.E.F., 1916.
Plant, A.	Civil Hosp. Reserve. Malta since September, 1916.
Pollard, S. E.	Matron, V.A.D., Yacht Club House, Gravesend, 1915.
Poole, B.	Graylingwell Military Hosp., Chichester. Sister since 1915.
Porter, E. H.	Sister, B.R.C. Hosp., Hawkstone, Fareham, to January, 1916.
Potter, M. L.	Acting-Matron, Q.A.I.M.N.S. Egypt. R.R.C. (1st Class), January, 1917.
Prince, A.	Civil Hosp. Reserve, B.E.F., since August, 1914.
Probert, F. M.	Sister, King George's Hosp., Stamford Street, since May, 1915.
Pryke, G. M.	Sister, Guards' Hosp., Reading, November, 1914, to March, 1915.
Purves, Lily	Sister, H.M. Queen Mary's R.N. Hosp., Southend-on-Sea, since October, 1914.
Quilter, Elsie	Civil Hosp. Reserve, B.E.F., since 1915.

Rabbidge, M. D.	Q.A.I.M.N.S. for India since 1915.
Rae, M.	Civil Hosp. Reserve, Salonika E.F., since November, 1915.
Randles, E.	B.R.C.S., Calais, 1914 to 1915.
Raven, E.	Civil Hosp. Reserve, B.E.F., since March, 1915.
Rawson, E.	Member, Almeric Paget Massage Corps, since 1916. R.N.D. Command Depôt, Blandford.
Ray, K. L.	Military Nursing in War Hospitals, France and Belgium, 1914 to 1915.
Rees, G. A. R.	Sister, Hôpital N.D. des Greves, France, February, 1916.
Rees, G. M.	Civil Hosp. Reserve, B.E.F., 1916.
Rennie, E. B.	Civil Hosp. Reserve. H.M.H.S. "Neuralia."
Rice, D.	Civil Hosp. Reserve, B.E.F., 1916.
Rice, Mary	King George V. Military Hosp., Dublin.
Richardson, A. M.	Matron, Military Hosp., St. Malo. St. John's Amb. Ass. to March, 1915.
Richardson, G. (née Cosby)	Civil Hosp. Reserve, B.E.F., to September, 1915.
Richardson, K.	Civil Hosp. Reserve, B.E.F., since August, 1915.
Ripley, M.	Civil Hosp. Reserve, B.E.F., since June, 1915.
Roach, E.	Civil Hosp. Reserve, B.E.F., since April, 1915.
Robins, A.	Sister N.Z. Army N.S., Hosp. Ship "Mohena," January, 1916.
Robinson, L.	Civil Hosp. Reserve, B.E.F., since 1915.
Rogers, A. M.	French Flag Corps. Bordeaux, 1915.
Rogerson, K.	Civil Hosp. Reserve, Cambridge Hosp., Aldershot.
Rollo, M. V.	Sister, Hôpital Anglais, L'Ile Barbe, Rhône, since 1916.
Rooke, R. M.	Sister, Q.A.I.M.N.S., B.E.F., since August, 1914.
Rose, Constance L.	Sister, St. John Ambulance Brigade Hosp., B.E.F., 1915 to 1916.
Roussiano, A. A.	Civil Hosp. Reserve. B.E.F., 1916.
Roussiano, M.	Civil Hosp. Reserve, B.E.F., since December, 1914.
Rowe, Alison	Sister, Hosp. for Officers, Eggington Hall, Derby, since November, 1916.
Ryan, F. E. M.	Sister, H.M. Queen Mary's R.N. Hospital, Southend-on-Sea.
Sadleir, A.	Civil Hosp. Reserve, B.E.F., since 1915.
Salter, Rose	Sister, H.M. Queen Mary's R.N. Hosp., Southend-on-Sea.
Sandeman, E.	Matron, Nursing Home for Officers of Allied Nations, Cannes.
Sautoy, A. du	Sister-in-Charge, Hester Combe Temp. Hosp., Taunton, since 1915.
Sautoy, C. du	Night Supt., Ulster Hosp., Allie du Sacré Cœur, Lyons, September, 1916.
Savage, M.	Civil Hosp. Reserve, B.E.F., since 1915.
Sawyer, M. D.	Civil Hosp. Reserve, B.E.F., since October, 1915.
Sealy, C. (née Balkwill)	B.R.C.S., France, since March, 1916.
Selby, S. A.	Sister, Endsleigh Hosp., N.W., since November, 1915. R.R.C. (2nd Class), 1916.
Self, M. E.	Civil Hosp. Reserve, B.E.F., since May, 1915.
Sergeant, L.	Sister, Kasr-el-Aini Hosp., Cairo.
Sewell, A.	Nurse-in-Charge, Lady Rachel Byng's Relief Hosp., Hadley, Barnet, 1915.
Shackleton, E.	Civil Hosp. Reserve, Salonika E.F., since December, 1915.
Shann, C. L.	Q.A.I.M.N.S. Reserve. Egypt since 1915.
Sharwood, H. M.	Sister, Civil Hosp. Reserve, B.E.F., since August, 1914.
Sheild, L.	Sister, Officers' Section, Guy's Hosp. R.R.C. (2nd Class), 1916.
Sheldon, F. A.	Member of Selecting Committee, V.A.D., Headquarters, Devonshire House, W.
Shepherd, D.	Sister, T.F.N.S., B.E.F., since 1915.
Shepherd, M.	Civil Hosp. Reserve, B.E.F., 1917.
Sherrin, M.	Q.A.I.M.N.S. Reserve. Dover since March, 1916.
Shewell, D. C.	Nursing Sister, Q.A.R.N.N.S., Royal Naval Hosp., Portland, since October, 1915.
Shorter, K.	Sister, Auxiliary Hosp., nr. Ipswich, 1916.
Shuker, M.	Sister, N.Z. Army N.S., Egypt and England, since 1915.
Simpson, Mabel	B.R.C.S. Sister, Clandon Park Hosp., 1914.
Sinclair, M. J.	Sister, H.M. Queen Mary's R.N. Hosp., Southend-on-Sea.

Skoü, M.	Sister, Mrs. Bellville's Officers' Hosp., Queen Anne Street.
Slack, F. E.	Sister, T.F.N.S., Salonika E.F. since 1916.
Smith, E. Ryman-	Q.A.I.M.N.S. Reserve for India. Indian E.F. since 1916.
Smith, E. A.	Sister, Empire Hosp. for Officers, Vincent Square, since September, 1916.
Smith, Violet	Sister, Red Cross Hosp., Netley, November, 1914, to May, 1915.
Southcott, F.	Civil Hosp. Reserve, B.E.F., since November, 1915.
Spalding, M.	T.F.N.S. Home Service.
Spedding, F. A.	Sister, Civil Hosp. Reserve, B.E.F., since 1915.
Spouncer, E. M.	Civil Hosp. Reserve. H.M.H.S. "Neuralia."
Spurway, M.	Q.A.I.M.N.S'. Reserve, B.E.F., since 1915.
Squire, E.	Civil Hosp. Reserve, B.E.F., since November, 1914
Stebbing, F. (née Orchard) ...	Sister, Q.A.I.M.N.S. for India, to July, 1915.
Stedman, E.	Sister, King George V. Hosp., Stamford Street, since May, 1915. R.R.C. (2nd Class), 1916.
Stewart, R. (née Daniell)	Red Cross Hosp., Ware.
Stone, E. A.	War Service in Auxiliary Military Hosp., England.
Stone, Gladys	Civil Hosp. Reserve, France and England, since August, 1914.
Strange, C.	Q.A.I.M.N.S. Reserve. B.E.F. since 1915.
Strutt, V.	Civil Hosp. Reserve, B.E.F., since 1915.
Studdert, E. M.	Principal Sister, King George V. Hosp., Stamford Street, since March, 1915.
Suart, H.	Matron, Q.A.I.M.N.S., since 1916. R.R.C. (1st Class), 1916.
Sullivan, H. (née Marshall) ...	Sister, B.R.C. Hosp., Stow, to July, 1915.
Surtees, S.	Civil Hosp. Reserve, B.E.F., since September, 1914.
Sutherland, L.	Sister, Mrs. Bellville's Hosp. for Officers, Queen Anne Street, since November, 1914.
Swift, S. A.	Matron-in-Chief, Trained Nurses' Dept., Joint War Committee, since 1915. R.R.C. (1st Class), 1916, and Lady of Grace of St. *John of Jerusalem.*
Taylor, C.	Civil Hosp. Reserve, H.M.H.S. "Dunluce Castle," July, 1916.
Taylor, H.	Staff-Nurse, H.M. King George's Hosp., Stamford Street, to 1916.
Taylor, Kate E. G.	Sister, T.F.N.S., 1st Eastern General Hosp., Cambridge, since 1914. R.R.C. (2nd Class), 1916.
Taylor, Kathleen	Matron, British Red Cross Hosp., Southall, to 1916.
Thackray, G.	Civil Hosp. Reserve, Salonika E.F., since October, 1916.
Thomas, A. Freeman	Matron, Officers' Convalescent Hosp., Bantry Bay, Ireland.
Tippetts, M. E.	Sister, Q.A.I.M.N.S.I., Indian E.F.
Todd, C. (née Edwards)	Sister, Queen Mary's R.N. Hosp., Southend-on-Sea.
Todd, C. E.	Matron, St. John Ambulance Brigade Hosp., Etaples, since July, 1915. R.R.C. (1st Class), 1916.
Todd, W.	Civil Hosp. Reserve, B.E.F., since June, 1915
Traill, Agnes	Sister, Kasr-el-Aini Hosp., Egypt.
Tubbs, E. F.	Anglo-French Hosp., Nevers, France. Matron since November, 1915.
Turner, E. M.	B.R.C. Hosp., Netley. Sister since November, 1914.
Turner, H. (née Lambert) ...	Hon. Matron, B.R.C. Society's Central Workrooms, Burlington House, W., since 1914.
Turner, Lucy	T.F.N.S., 2nd Eastern General Hosp., Brighton, since 1914.
Twose, B.	Civil Hosp. Reserve, B.E.F., to December, 1915.
Tyers, L.	Q.A.I.N.S.R., Egypt, since 1915.
Tyler-Cove, V. R.	Q.A.I.M.N.S. for India since April 1916.
Tyndale, M.	Civil Hosp. Reserve, B.E.F., since March, 1915.
Vallancey, Lucy (née Bolton) ...	Temp. Matron, Military Hosp., Hendon, 1914.
Vanes, M. E.	Sister, H.M. Queen Mary's R.N. Hosp., Southend-on-Sea to 1917.
Veech, Annie	Nursing Sister, Q.A.I.M.N.S., India.
Vernede, C.	Q.A.I.M.N.S. Reserve. Malta since 1915.
Vertue, E. M. (née Wallace) ...	Sister, Hosp. for Officers, Vincent Square, to December, 1916.
Vine, H. M.	Sister, Civil Hosp. Reserve, Reading Military Hosp. since 1915.
Vine, K.	Civil Hosp. Reserve, England, since 1915. R.R.C. (2nd Class), 1917.
Vivian, M.	Matron, Princess Christian Hosp., Deal.
Von Pein, A.	Sister, Coulter Hosp., Grosvenor Square.

Wade, F. H.	Civil Hosp. Reserve, M.E.F., since October, 1915.
Wallis, G.	
Ward, A. M.	Sister, B.R.C. Hosp., Netley, since November, 1914.
Ward, C.	Sister, Military Hosp., Briar's Cross, Limpsfield.
Ward, F. M.	No. 5 Temp. Hosp., Exeter.
Warner, H.	Q.A.I.M.N.S. Reserve. M.E.F. since September, 1916.
Warner, W.	Civil Hosp. Reserve, B.E.F., since 1914.
Waterman, B.	Masseuse, Eggington Hall Military Hosp., Derby.
Waters, G.	Civil Hosp. Reserve, B.E.F., since August, 1914.
Watkins, E. (née Haggis)	Civil Hosp. Reserve, B.E.F., since 1915. R.R.C. (2nd Class), 1916.
Webster, M.	Civil Hosp. Reserve, Salonika, July, 1916.
Weighill, E. W.	Sister, Military Hosp., Endell Street, since December, 1915.
Weller, E. M. (née Cooper) ...	Sister, Q.A.I.M.N.S. Reserve. Military Hosp., Farnham, since February, 1915.
West, M.	Civil Hosp. Reserve, B.E.F., since August, 1915.
West, M. (née Stanley-Adams)...	Sister, Bevan Hosp., Sandgate, to December, 1915.
West, M. B.	Sister, H.M. Queen Mary's R.N. Hosp., Southend-on-Sea, 1915.
White, Gladys	X-ray and Theatre Sister at Millicent, Duchess of Sutherland's Hosp., Calais.
Whittam, J. E.	Sister, Masseuse Dept., 4th Southern General Hosp., Plymouth, since April, 1916.
Wickham, E.	Sister-in-Charge, Goudhurst V.A.D. Hospital, since April, 1916.
Willes, Amy	Acting-Matron, Q.A.I.M.N.S., Connaught Hosp., Aldershot, 1916. R.R.C. (1st Class), 1916.
Willes, M.	Sister, Q.A.I.M.N.S., Egypt, 1916. R.R.C. (2nd Class), January, 1917.
Williams, E....	Civil Hosp. Reserve. B.E.F. since November, 1916.
Wilson, D.	Civil Hosp. Reserve, B.E.F., since 1914.
Wilson, L. H.	Sister, Hampstead Military Hosp., since 1916.
Windemer, E.	Matron, Freemasons' War Hosp., Fulham Road, since August, 1916.
Windemer, N.	Lady Superintendent, St. Mark's Military Hosp., Tunbridge Wells, since 1915.
Windley, D.	King George V. Hosp., London, to August, 1915.
Witchell, M. I.	Civil Hosp. Reserve, B.E.F., since December, 1914.
Wolfe, E. M.	Civil Hosp. Reserve, B.E.F., since February, 1916.
Wood, E.	Sister, T.F.N.S., B.E.F., since May, 1915.
Wood, Lorna	Matron, B.R.C. Hosp. No. 7, Alexandria, since September, 1915.
Wood, M. I.	Superintendent, Women's Hostels, Eltham, since August, 1916.
Woodhead, A. (née Walker) ...	Sister-in-Charge, Auxiliary Hosp., Cobham, Surrey.
Woollett, D.	King George V. Hosp., Stamford Street, since 1915. R.R.C. (2nd Class), 1916.
Worsley, N.	British Red Cross Hosp., France.
Worthington, J. F.	Masseuse, King's Lancashire Military Camp, Blackpool, since October, 1915.
Wright, A.	Sister, Hôpital Temporaire, Arc-en-Barrois, Haute Marne, 1915.
Wright, L. F.	Sister, Military Hosp., Bramley, since 1915.
Yates, M.	Matron, Officers' Hosp., 27, Berkeley Square.
Yell, M. L.	Night Sister, Auxiliary Hosp. for Officers, Northern Command, Wetherby, Yorks.

This list is compiled from the latest information received regarding their War work from those named therein. The last post held is mentioned only.

Matron will be glad to have inaccuracies corrected, and at all times to be fully posted as to the movements and appointments of all engaged on active service.

HONOURS FOR GUY'S NURSES.

We are pleased to record that the following Guy's Nurses have been awarded the Royal Red Cross Decoration in recognition of their valuable services in connection with the War :—

First Class Decoration.

Haughton, Miss L. V.	Member of Nursing Board, Q.A.I.M.N.S., and Matron, Guy's Hosp., 1909 to 1917.

Second Class Decoration.

Beloe, Miss E. F.	Q.A.I.M.N.S.R. Matron, Military Hosp., Herne Bay. Guy's Hosp., November, 1903, to June, 1907.
Clarke, Mrs. M. (née Crocker) ...	Q.A.I.M.N.S,R. Staff Nurse, King George V. Hosp., Stamford Street, London, S.E. Guy's Hosp., February, 1903, to April, 1906.
Cook, Miss M. E.	Staff Nurse, Huddersfield War Hosp. Guy's Hosp., February, 1900, to February, 1903.
Hobhouse, Miss M. E.	Q.A.I.M.N.S.R. Sister, Military Hosp., Devonport. Guy's Hosp., Lady Pupil and Sister, May, 1894, to August, 1898.
Marsh, Miss M. E.	T.F.N.S. Sister, 3rd Southern General Hosp., Oxford. Guy's Hosp., January, 1907, to July, 1910.
Vine, Miss K. N.	Acting Sister, Q.A.I.M.N.S.R., Cambridge Hosp., Aldershot. Guy's Hosp., September, 1907, to March, 1911.

MATRON'S OFFICE,
GUY'S HOSPITAL, S.E.

Appointments.

R.N.M.S.

The following appointments have been made :—Temp. Surgeon G. E. W. Lacey to the *Victory*, additional.

R.A.M.C.

To be Acting Lieut.-Colonel whilst commanding a Field Ambulance :—T. B. Layton.

To be Brevet-Colonel :—Lieut.-Colonel W. G. Beyts.

Temp. Captain R. H. J. Swan to be temp. Major.

Temp. Lieuts. to be temp. Captains :—W. G. Parker, E. R. Hart, A. H. G. Burton, A. N. Cox, D. Steele-Perkins.

To be temp. Lieuts.: E. Ashby, K. J. H. Davis, J. Cameron, W. F. Box, H. Cardin.

Temporary Captain relinquishing his Commission :—F. A. Bainbridge.

Temporary Lieutenants relinquishing their Commissions :—A. H. B. Kirkman, R. Montgomery, G. B. S. Soper.

Temporary Hon. Captain T. G. Evans having resigned his appointment at the Welsh Hospital, Netley, relinquishes his Commission.

Temporary Captain W. J. D. Smyth to be Lieutenant, and is granted the rank of temporary Captain.

Capt. Norman Flower, R.A.M.C., has been appointed Divisional Surgical Specialist, Tigué Hospital, Malta.

Special Reserve of Officers.

Lieuts. to be Captains :—W. J. Vance, R. L. Portway, G. E. Kidman, J. M. H. Campbell, P. D. H. Chapman.

To be Lieutenants :—H. St. H. Vertue, R. R. Traill, L. S. Gathergood, M. C. Joynt.

Honours.

Bar to Military Cross :—Temp. Capt. A. C. Hancock, R.A.M.C.

Mentioned for War Services.

The Secretary of State for War has issued a long list of names which have been brought to his notice for valuable services rendered in connexion with the War, in which the following are included :—Bt.-Col. W. Hind, Lt.-Col. C. W. S. Magrath, Lt.-Col. E. F. Maynard, Lt.-Col. Sir S. F. Murphy, Lt.-Col. J. V. Salvage (ret. pay), Lt.-Col. T. B. Winter, Lt.-Col. and Bt.-Col. E. M. Pilcher, Temp. Lt.-Col. W. L. W. Marshall, Major H. Stott, Temp. Captain E. R. Fothergill.

King's Own Malta Regiment of Militia.

Lt.-Col. R. P. Samut.

Wounded.

Capt. J. K. Clark, L.D.S. Eng.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Interned 1914-1916.

Seven Missionaries, amongst them a Guy's nurse, living at Korogwe, German E. Africa, in August, 1914, were officially told by a German, when he came to search the mission station for guns, etc., that England was at war with Germany; this was about August 10th. We had heard native rumours, and one of our men had been to the station, in order to get definite news, having heard telegrams were posted up. However, he was immediately ordered off and told if found there again he would be arrested as a spy.

After that we were left in peace, but had several urgent and secret messages from the native chief telling us and all natives in the mission compound to be very careful in our speech and actions as spies had been told off to watch us.

On August 24th, 2.40 p.m., two German officers with porters arrived, said we were to shut up houses, etc., pack two boxes each and be ready to quit in half an hour. The officer in charge was anything but sober. The men were told to take all the mission money and as much food as could be got together in the time; at 3.30 p.m. we were conducted to the station with 32 loads, enough food we reckoned to last about three months. At the station we waited two hours for the train. We reached Mombo at 8.30 p.m., the nearest station to Wilhelmstal our destination; there we had supper and we women had rooms, but the three unfortunate men had to sleep in the train, and were not even allowed to walk to the hotel in the morning without an escort.

We left Mombo at 5 p.m. in a motor which was a large char-a-banc sort of thing, and Wilhelmstal was 5,000 ft., so long as it was light it was a delightful journey up and round the hills; once very unexpectedly round one of the curves we met a bullock-cart, we held our breath for we nearly went over the edge! We suppose we were taken up in the evening in order not to see the fortifications, and were put in a boarding-house which was quite separated from Wilhelmstal by hills and woods. The next day we were asked to give up our money; our food packages we never saw again. Having promised to keep within prescribed bounds we were left unguarded. After a few days they wired for all keys belonging to Korogwe houses, dispensary, hospitals, etc. We had congratulated ourselves before being taken away that we had just received our six months stores from England, and a year's drugs for medical work; *but* the Germans had the benefit. Korogwe mission station was promptly turned into a military hospital, and after that affair at Tanga in November when the English did so badly, our large church was filled with wounded Indians, and our houses with English soldiers. How the Germans rejoiced over that, many came to the house we were at for a beer drink one Sunday, wearing badges and ribbons they had taken off our soldiers at Tanga. So nice for us as they sat and sang on the verandah which was divided from our sitting-room only by glass doors.

On November 11th we were moved to a farmhouse about one and a half miles the other side of Wilhelmstal. The farmer, his wife and two children—very homely, hard-working people—moved into their old house and gave up to us their newly-built one. Here we were very much restricted in our walks, but well looked after otherwise. We women took turns in bread-making and giving daily help in the kitchen, always doing the ironing, mangling and washing work for them as for ourselves, and one of us was once asked to help the housewife dig up some potatoes in a field. The hens seemed to have been in the habit of making the beds their nests; one was constantly chasing them out of the rooms, and often found an egg. One turkey was never satisfied with less than the sofa to sit on, but preferred a lap! In order to help time pass, we all studied native dialects.

At the commencement of the war other missionaries from outlying districts had been called into a big mission station about thirty miles from Korogwe. All the men, with one exception, were taken away in September; he, with the women (ten in number), were allowed to stay and continue their work, being bound to keep within an hour's walk in any direction. Suddenly they were accused of signalling to the English from a big hill near, and suddenly removed under grave suspicion! After three weeks' journey the women were all placed with different Church Missionary Society people at their stations in the centre of the colony; the man went to the military camp. In consequence of this, it was said, January 20th, 1915, found us leaving the farm en route for Morogoed, a distance of about 200 miles. It took us three and a half hours to walk down to Mombo; from there we trained to Korogwe. We saw some of our own house boys, but were not allowed to speak to them; indeed, we had native soldiers strictly guarding us. We asked for our own blankets, pillows, mosquito nets, chairs from our houses, but were refused. The next day donkey carts were commandeered for our luggage, and we were told we might sit on the boxes in turn. Leaving Korogwe we were marched through in an impressive manner, eight native soldiers and two Germans guarding us in front, the sides, and behind. The Government had provided us with a camp bed and two blankets each; no nets or tents! As the sea was closed to the Germans, this was now the route of communication between Tanga and the Dar-es-salaam railways. Large barns were built at intervals all along for the convenience of native porterage; these being usually our stopping places, we slept mostly in the open in preference. After three days' hard walking we reached Handeni, waiting here two days to change guards and porters. The men slept with some of the discharged wounded soldiers from Korogwe now being sent to a military camp; the women in a native cell! After another fifteen days' journey of varying distances, fed on meat and rice entirely, sometimes finding water, sometimes hardly any (and it was the hottest time of the year), we arrived at a

station called Kimamba. Here we waited three days for a train.

The doctor of a large native hospital put us up in a large room in his grass house, and was extremely kind, giving us luxuries in the shape of jam, fruits, bread, &c. Again the men came off badly, sleeping under a leaky verandah roof and getting wet every night, nor were they so well fed. The day that the train came in found us and our luggage ready at the station. The train arrived, we stood expectantly, but the guard of the train refused to take us—had, he said, no room either for us or our luggage! The next day we were sent on by a luggage train. After three hours' walk from the station we rested for the night; next day seven hours' climb and then our destination. This place was 6,600 feet high.

A real prisoners' camp guarded by native soldiers. Our boxes were overhauled by them; every book and every scrap of writing found was taken to the German in charge, and all writing was sent to the Government officials at Morogoro. Fires were allowed in the evenings to warm us and to light us to bed, but soon the order "No lights allowed after 7.30 p.m." came from the Government, so fires were stopped. Daily walks from 4 to 6 p.m. were allowed along one road supervised by two native soldiers, until somebody tried to escape from another camp, then this was not allowed. We numbered twenty-four in all, and the German was ordered to feed us only on what could be procured from the country round about.

Breakfast—millet bread (very dry and sandy), meat or egg, sour milk, cheese, coffee. Dinner—meat with cooked balls of millet flour (just like clay). 3.30 p.m.—bread, cheese (with luck a little butter), coffee. Supper—just like dinner. We petitioned the Government for better food; the reply was, "Anyone complaining was to have *none* for a whole day." We did all our own work, all finding washing the most difficult. An archdeacon washing in native fashion was most amusing; another cleric rubbed his socks until he found large holes had appeared: another, alas, washed but seldom! People were often ill (due to that flour). Government said it was due to want of exercise! So every day from 4 to 6 people had to walk round the house, soldiers on guard; this developed into games such as rounders, cricket and fives. There were many changes, people coming and going from one camp to another. It was a very good way to let all the prisoners know the latest news, of course, from the latest military prisoners!

In June, 1915, we numbered 40, now mostly women, as the Church Missionary Society people were brought up with the U.M.C.A. people living with them. Our rooms were small, and in order to fit us all in, wooden beds were fixed one on top of the other. We now had rather better food, as "the food of the country round about" had given out; it was sent from Morogoro, varied with rice, potatoes, and dried peas. Women, two by two, week by week, now superintended the cooking; from the store room one managed occasionally to sneak a few of the German's onions! but we did more than that, we regularly managed to get hold of his paper (printed in the Colony), and so got some sort of news, generally that they had blown up the railway in British East Africa, etc. On the quiet, in exchange for old clothes we got from natives, and even from the soldiers (strictly forbidden) honey and eggs.

October, 1915, found us all at work for the German government—the men making wooden nails for boot making; the women sewing underpants and knitting socks. Morogoro ordered: "Women to be counted night and morning," as well as the men; also "everybody's sun hat and boots to be given up each night at 6.30 p.m." One went for them in the morning; this to prevent us running away!!!

February, 1916.—Moved to another camp; Germans wanted healthy place for convalescent home. We were now in a much hotter place, but had more rooms, and our numbers reached 50. We heard rumours of the advance of the English and longed that it might be true (papers here were unattainable). It was true, for an order by telegram Easter Eve arrived. In half an hour we were all on our way to the station, where we were put in a shed with 40 native prisoners, with soldiers at the door. Time of expected arrival of train unknown. We sang lustily half the night!! The soldiers outside refreshed themselves with the native intoxicant, and eventually made themselves troublesome; the men inside tried to quiet them; this aroused the guards, and then there was trouble. One of these soldiers was locked inside with us and told to shoot the next person who spoke!!! No one spoke. At 4 p.m. we were all packed in three cattle trucks and reached Tabora 6 a.m. in the morning. Tabora had been the military camp, but most of the service men had been removed the day before, the civilians only left. We were 29 in a room, locked in from 7 p.m. until 6 a.m.; the men, 84 in one room, under the same conditions, and two native soldiers walking up and down inside with fixed bayonets. Things now commenced to slacken; the men who had daily drawn all the water for the camp from a well at a distance away were relieved and Indians sent. We were told it was not compulsory to knit socks for the Germans, only a work of charity!! Some gave it up. Bread was increased—half a small loaf instead of a third. Tabora bread was better. All women were told they might go out and live in the town!! After a time all missionaries were turned out by compulsion; and after ten days, in which we had been moved twice, were all called back into the camp on a repatriation scheme!! When the time was up, now the end of August, we were told the English would not take us. Having been turned out, then brought back again, we now demanded to be sent out again; and after making much trouble we went, with a weekly allowance, some of us living in a large build-

ing used usually as a whiskey distillery; others were given small mud and stick houses; and so the Belgians found us when they entered Tabora September 19th, much to our great joy at at last being free.

When we left Tabora, October 3rd, this camp was filled with Germans, and the Belgians had found the rules which they had enforced on our own men, so that they were now made to do the same, not by any means pleasant duties. The suffering of the natives has been intense, the whole time; they hate the Germans.

Abstract of Summary of Anæsthetics and Operations for the Year 1916.

The number of cases in which general anæsthetics were administered was 7,752, among which were 64 intratracheal insufflations of ether, 8 of ether and C.E., and 1 of ether and chloroform. Spinal anæsthesia was also employed on 41 occasions, and on 27 occasions spinal analgesia followed by a general anæsthetic. The total number of operations was 7,416 in Wards (Bright Ward excepted), Special Departments, Out-Patient Departments and Surgeries. There was one case of a death under anæsthesia reported to the Coroner, particulars of which are furnished in the Appendix.

There have been 5,509 cases of general anæsthesia in the Dental Department; 5,197 under Nitrous Oxide Gas, 309 under Ethyl Chloride, 2 under Ether, and 1 under A.C.E.

Operations done on the Medical side are entered under the Assistant Surgeons corresponding to the Physicians or Assistant Physicians in charge of the Wards, the table below showing how many operations are actually performed in these wards :—

Anæsthetics.

A.C.E.	693
C.E.	1,522
Chloroform	479
Ether (including Gas and Ether)	424
Gas, and Gas and Oxygen	1,414
Intratracheal Insufflation of Ether	64
Intratracheal Insufflation of Ether and C.E.	8
Intratracheal Insufflation of Ether and Chloroform	1
Spinal Analgesia	41
Spinal Analgesia followed by a General Anæsthetic	27
Other Anæsthetics and Sequences	3,120
	7,793

Administration of Anæsthetics.

Staff Anæsthetists	2,144
Visiting Staff	145
Resident Surgical Officer	25
House Officers	5,146
Other Qualified Men	333
	7,793

Operations.—Tabulated according to Wards and Departments.

Astley Cooper	293	Mary	24
Cornelius	279	Stephen (Officers' Section)	140
Lazarus	258	Esther	21
Job	373	Queen Victoria	468
Naaman	268	Clinical	29
Luke	241	Isolation	6
Patience and Samaritan	464	Out-Patients	1,620
Evelyn	284	Front Surgery	395
Charity	261	Back Surgery	108
Dorcas	377	Light Department	2
Lydia	375	Nurses' Sick Room	53
Martha	336		
Eye Wards	691		7,416
Addison	50		

Turning to the General Wards, it may be noted that the totals of operations are as follows :—

Surgeons	1,143
Assistant Surgeons	855
Specialists	85
Resident Surgical Officer	778
House Surgeons and Assistant House Surgeons	393
Dressers	645
	3,899

the remaining 30 operations, bringing the total up to 3,929, were performed by other operators.

It should, of course, be remembered that all operations in wards by Dressers and Resident Staff are performed under the supervision of the Resident Surgical Officer or of the Surgeon-in-Charge, and that no account is taken of operations done either under local anæsthetics or without anæsthetics at all.

Operations in the Obstetric Department (Queen Victoria and Patience Wards) number 492, of which 257 were performed by the Obstetric surgeons, 2 by the R.S.O., 92 by the Obstetric Assistant, 133 by the Obstetric Residents, and 2 by Dressers, while 6 operations were performed by other operators.

The operations upon Ophthalmic cases in the wards number 112, of which 3 were done by Ophthalmic Dressers, 7 by the Ophthalmic House-Surgeon, 1 by the R.S.O., 87 by the Ophthalmic Surgeons, and 14 by other operators.

There were 633 operations for Throat and Ear Diseases in the wards, 464 by Surgeons, 2 by the R.S.O., 79 by Clinical Assistants, 38 by the House-Surgeon, 40 by Dressers, and 10 by other operators.

In the Orthopædic In-Patient Department 58 operations were performed by the Surgeon of the Department.

In the Genito-Urinary Department 67 ward operations were performed, 41 by the Surgeon, 11 by the R.S.O., and 15 by Dressers.

In the Front and Back Surgery 503 operations were performed, 109 by House-Surgeons or Out-Patient Officers, 390 by Dressers, and 4 by other operators.

In the General Out-Patient Department 424 operations were performed, 2 by Surgeons, 1 by the R.S.O., 7 by House-Surgeons, 405 by Dressers, and 9 by other operators.

In the Special Out-Patient Departments 2 operations were performed upon Eye cases, 1 by the Surgeon, and 1 by a Dresser; 2 operations were performed for Obstetric cases, 1 by the Obstetric Assistant, and 1 by the Obstetric Resident; 965 upon

Throat and Ear cases, of which 38 were by the Surgeon, 342 by the Clinical Assistant, 26 by the Ophthalmic House-Surgeon, and 529 by Dressers, while 30 were by other operators; 227 operations were performed in the Orthopædic Department, 85 by the Surgeon, 7 by the R.S.O., 1 by the Clinical Assistant, 129 by Dressers, and 5 by other operators, and in the Light Department 2 operations were performed, 1 by the Surgeon, and 1 by another operator.

APPENDIX.

L. W. B., æt. 24, was admitted into Evelyn Ward under Mr. L. A. Dunn on the 19th May, 1916.

There was a history of recurrent attacks of abdominal pain extending over a period of two years; the last attack was experienced three weeks before admission. Chronic appendicitis was diagnosed.

It was decided to operate on 22nd of May, and for this purpose the patient was given two days preparation.

A medical examination of the heart and lungs showed no signs of disease, and the patient appeared in good health for the operation. He was taken into the anæsthetising room at 10.30 a.m. on the 22nd May and an injection of atropine sulphate gr. 1/100 was given. The Assistant House-Surgeon administered the anæsthetic. Chloroform, with a Schimmelbusch mask, was used. The patient was transferred to the operating table, and suddenly without warning ceased breathing. There was no sign of the heart beating. Every means of artificial stimulation to cardiac and respiratory systems were used, but without avail. The degree of surgical anæsthesia had not been reached when the patient collapsed.

At the post-mortem examination, made by Dr. Spilsbury on May the 24th, it was found that there was a large persistent thymus gland, stretching down over the heart. The tonsils and follicles of the tongue were hypertrophied. The spleen showed advanced stages of lymphoplasia, and a large calcified gland was lying mesial to the cæcum. The heart and lungs were normal except for slight changes in the heart muscle found microscopically. The appendix showed signs of disease. In accordance with the expert evidence, given at the coroner's inquiry held by Dr. Schroder on the 25th May, the jury returned as their verdict :—

"That the cause of death was cardiac syncope, fatty degeneration of heart muscle, and status lymphaticus, while and under and acclerated by chloroform duly and properly administered for appendicectomy. Misadventure."

Guy's Hospital Physiological Society.

A meeting of the Society was held on January 29th, when Messrs. Grant, Massie and Morris Cohen read a paper on "Protective Mechanism." Mr. A. H. Todd took the chair.

Their paper dealt with the protective mechanism of man, but they prefaced it with a few remarks on that of the vegetable and animal kingdoms.

The methods by which man regulates his temperature were briefly explained and the necessity of an even temperature was pointed out, death occurring from too great a rise or fall. In fevers the rise was helpful to the organism in dealing with the infection.

Blood is a fluid of vital importance, and its loss from various lesions would soon prove fatal were it not for its power of clotting and thus plugging the leak. As, however, it would be equally dangerous for the blood to solidify throughout the system, the clotting ferment is formed from a precursor only on contact with damaged tissue. Besides this, the blood has the power to form substances which will counteract the toxic products of bacteria (antitoxins), and also substances which will render the invading bacteria more amenable to the attacks of the leucocytes (opsonins.

One of the greatest protective mechanisms the body possesses is the sense of pain. By means of its various reflexes the body is enabled, on receiving a painful stimulus, to remove the affected part immediately from the danger zone without waiting for instructions from the brain, or, in the event of this being impossible (*e.g.*, a stomach-ache), to send for a doctor. The authors questioned the wisdom of unrestrained use of anæsthetics in minor operations and in child-birth as, especially in the latter, useful reflexes were abolished.

The importance of sleep in giving the body time to repair itself were dealt with, and several very interesting theories of the cause of sleep were brought forward. The discussion which followed centred mainly round these theories.

Papers by Guy's Men.

Edmund Ivens Spriggs, M.D. Lond., F.R.C.P, Lond.: The food of the nation.—*Lancet*, Feb. 10th, 1917.

A. T. MacConkey, M,B., B.C. Cantab., D.P.H.. in collaboration with Annie Homer: On the passive immunity conferred by a prophylactic dose of anti-tetanic serum.—*Ibid.*

John Howell, M.B., B.S. Lond., F.R.C.S. Eng.: Rotation of the liver on its vertical axis.—*B.M.J.*, Feb. 17th, 1917.

Richard Kay, M.B. Lond.: Puerperal fever treated by vaccine.—*Ibid.*

Charles H. Bubb, L.D.S. Eng.: Description of two radium applicators for malignant disease of the mouth and pharynx.—*Archives of Radiology and Electropathy*, February, 1917.

Birth.

MESSENGER.—On February 9th, Lily (*née* Wood) the wife of Lieut. H. L. Messenger, R.A M.C., of a son.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

OUR suggestion of a wheeled stretcher for bringing in cases from the District has brought us a letter from a correspondent who generously offers to subscribe five pounds towards the cost of presenting one to the Hospital. The cost of a suitable vehicle would be about £20, and as we feel sure that there are many old Guy's men who would like to do something to relieve the Hospital of war-time expenses, we are opening a subscription list for this object. Contributions should be sent to the Manager, GUY'S HOSPITAL GAZETTE. In the event of more money being received than is required, proportionate amounts will be returned to subscribers.

As long ago as 1912 a scheme for increasing the number of beds in the Hospital was under consideration, and was approved by the King's Fund. The changes involved were the removal of the wardmaids' dormitories from the top of the medical block to Tabard House, the demolition of Clinical, and the addition of floors to the medical block. This scheme was to increase the number of beds by about 100. When the proposals were put forward it was thought that the extension of the Nurses' Home, completed in 1911, would be sufficient to allow for the increased nursing staff.

Changes at the Hospital since 1912 have, however, necessitated such an increase in the nursing staff that the extra accommodation provided in 1911 has been already largely used up, and if the scheme of adding 100 beds is to be carried out it will be necessary again to enlarge the Nurses' Home. Further, the expansion of the Massage and Electrical Departments has been very great during the past few years, and at present the old wardmaids' dormitories on top of the medical block are used by these departments.

It is now proposed to add a wing to the Nurses' Home which will occupy part of the site of Clinical. The upper floors are to provide extra accommodation for nurses, while below will be new quarters for the Massage Department, etc. The plans of the extension are such as not to diminish the amount of light and air, and though the whole of the site of Clinical will not be vacated the Park will be considerably increased in size.

The completion of this scheme will render the execution of the original proposal of 1912 possible, as the new extension will not only house the extra nurses required, but will enable the Medical Electricity and Remedial Exercises Departments to be moved from their present site on top of the Medical block.

So long as the war continues of course no building operations can be undertaken, but it is

hoped that the Hospital may be in a position to proceed with the work as soon as the cessation of war liberates labour and materials.

It is sad to see what a large number of cases of chronic heart disease are treated in the medical wards, for most of whom little permanent good can be done. A large proportion of such cases must be due to rheumatism in childhood, left either untreated or where the treatment has been insufficient. Were it possible to adopt a drastic rest treatment for the slighter cases of rheumatism in children there would be a great saving of life and health. Unfortunately, at present, very few convalescent homes are willing to take heart cases. If a large home for early cases of heart disease could be built, where prolonged rest amid healthy surroundings could be obtained, we should see fewer of the distressing cases of chronic heart disease which are so prominent a feature of the medical side of all big hospitals. Such cases are comparatively uncommon among the well-to-do classes owing to the fact that they have more opportunities for combating the disease early. There is no real reason why the institution of convalescent homes for heart cases should not do a great deal to eliminate the present state of affairs. The State has started a big campaign against venereal disease. It might just as profitably attempt to diminish the ravages of rheumatism. The establishment of a number of large institutions to receive cases from hospitals would not be a big expense as expense is reckoned to-day, and its great value from the point of view of the nation would be out of all proportion to the amount of money expended.

We have to congratulate Mr. Wheelton Hind, F.R.C.S.. on being awarded the Lyell Medal by the Geological Society of London. Mr. Hind has been able, in the intervals of a busy professional life, to make many valuable contributions to the study of geology in this country. At present Mr. Hind is on military service, but we hope that after the war he may be able to return to the geological work to which he has contributed so much.

We congratulate Capt. A. C. Hancock on receiving the award of a bar to the Military Cross. We believe he is the first Guy's man on whom this honour has been conferred.

At the present moment there are among the students and nursing staff a considerable number of victims of the various epidemics which are so prevalent in London. Measles, mumps, German measles, and chicken-pox are all represented. Luckily on the whole the cases are mild.

The shortage of potatoes is beginning to be felt at the Hospital. The caterers at the College have been able to keep up a fairly regular supply, but in the wards and the Nurses' Home potatoes are fast becoming a thing of the past. Even in Officers' Section there is no regular supply. There seems little doubt that for some months everyone will have to do without them, but we confess that we feel rather ashamed that the Officers' Section should be without them when they are still obtainable in the College.

Books received.

Spanish Self-Taught.

French Self-Taught.

French for the Front. The Soldier's Language Manual. English-French and English-German. Price 3d. each.

The Active Service French Book. Price 7d.

All the above are published by E. Marlborough & Co., 51, Old Bailey, E.C.

Catechism Series. Surgery (Parts I. & II), Physiology (Part I.), Pathology (Part I), Materia Medica (Parts I. and II). Published by E. & S. Livingstone (Edinburgh). Price 1s. 3d. each.

Obituary.

FRANCIS POOLE LANSDOWN.

M.R.C.S. Eng., L.S.A.

Consulting Surgeon to the Bristol General Hospital.

Mr. F. Poole Lansdown died on February 12th, 1917, at the advanced age of 83. His medical education was received at the Bristol Medical School and at Guy's Hospital, where he obtained the diplomas of M.R.C.S. and L.S.A. in 1856. For 60 years he was associated with the Bristol General Hospital as House-Surgeon, Surgeon, and Consulting Surgeon.

In his younger days Mr. Lansdown was a keen volunteer, serving as Surgeon to the Gloucester Volunteer Artillery, and reaching the rank of Lieutenant Colonel..

He was a careful and skilful operator and kept well abreast of the surgery of the day. He saw the dawn of anæsthetics, antiseptics, and abdominal surgery, but retired too early from surgical work to be able to avail himself of the more modern aids to surgical diagnosis.

His son and grandson are both Guy's men; the former is on the surgical staff of the Bristol General Hospital, while the latter is a student at Guy's Hospital.

Change of Address.

Capt. V. E. Lloyd. R.A.M.C., 1/2 North Midland Field Ambulance, B.E.F., France.

Capt. H. V. Leigh, M.B., R.A.M.C., from Registrar, 31 General Hospital, E.E.F., to be Registrar, 27 General Hospital, E.E.F.

Capt. K. N. Purkiss, 20th Combined Field Ambulance, 14th Division, I.E.F.D.

F. S. Wood, M.R.C.S., L.R.C.P., 24, Redcar Road, Sheffield.

Percival P. Cole, M.B., F.R.C.S., from 59, Queen Anne Street, W., to 91, Harley Street, W.

Lieut. E. Wragg, R.A.M.C., from Kincraig, York Road, Southend-on-Sea, to Imperial Hydro, Blackpool.

Capt. E. A. Leviseur, 1st South African General Hospital, B.E.F., France.

A Case of Subdiaphragmatic Abscess.

Alfred C., æt. 53, was admitted on January 28th, 1917, under Dr. Hale White with pains in the right lumbar region and back. He had been ill since Christmas, 1916, and had suffered from cough. He expectorated thick white mucus of foul odour. He stated that when three years old in 1866 he was in Guy's under Dr. Fagge and had a tumour removed from the liver. He was said to have been at that time a case of great interest. It has been found impossible to trace any report of the case.

On admission pulse was 88, temperature 98, respiration 20. On examination of the lungs there were a few râles at the right base and signs of fluid. The liver was uniformly enlarged and hard, reaching nearly to the umbilicus. The upper limit of liver dulness was normal.

As there was a history of alcoholism, Dr. Hale White considered the diagnosis of cirrhosis of the liver with pleural effusion in the right pleura as a possible one, and owing to the signs at the right base suggested needling, which was done with a negative result.

On February 1st as the temperature had been irregular and frequently risen to over 100° F., the chest was X-rayed. Dr. Lindsay Locke reported that the right diaphragm was very high in position. The median thoracic opacity was not much (if at all) displaced to the left. In consequence of the appearances, a suggestion of subdiaphragmatic abscess was made. On February 6th, after carefully percussing the chest, Dr. Hale White suggested doing a white blood count, and said that if there was a leucocytosis the case must be one of subdiaphragmatic abscess. Dr. Nicholson

found 17,000 leucocytes per c.mm., of which 75·8 per cent. were polymorphs.

The question of operation was discussed, but it was thought that owing to the inability to withdraw pus by needling great difficulties would be experienced in draining the abscess by surgical means, and it was decided to wait for a time in the hope of its becoming more easily accessible.

On February 7th, patient suddenly brought up about two pints of greenish pus, which bore no resemblance to pus from a liver abscess. The temperature on February 7th was 101° F., and after coughing the pus up fell to below normal and remained so for 36 hours. A specimen of the pus was sent to the Bacteriological Department, who reported that direct examination showed the presence of Gram-positive streptothrix filaments, cultivation of which was unsuccessful. Cultivations gave a mixed growth of B. coli, streptococcus longus, and micrococcus catarrhalis.

On February 9th the temperature again began to rise. Dr. Hale White saw the patient and said the subdiaphragmatic abscess had burst into the lung. He suggested raising the foot of the bed in order to facilitate drainage. In spite of this the temperature remained high in spite of the fact that considerable amounts of pus were being coughed up. In fact, the drainage was quite as free as that which could have been attained by surgical means.

The patient continued to get weaker, and on February 19th he began to cough up blood, and died that afternoon.

The post-mortem report is as follows :—

There is a thick fibrous-walled cyst with a craggy, calcareous lining of about a litre capacity. It rests on the upper and posterior surface of the liver, chiefly to the right of the falciform ligament, and descends posteriorly to the upper level of the pancreas. It is in contact with the posterior abdominal wall, from which it could be easily separated. It has pushed the diaphragm upwards as high as the level of the fourth thoracic vertebra. Its left border is formed by the pericardium, while on the right it has pushed the diaphragm into close contact with the right thoracic wall. In the upper part the cyst wall and the diaphragm merge into one another and is adherent to the under surface of the right lung. The average thickness of the cyst wall is three-sixteenths of an inch. Though it rests upon the liver, it has not invaded the substance of that organ.

The cyst has a fistulous opening leading into the right lung, which has caused a septic broncho-pneumonia. Where the cyst is in contact with the pericardium there is a shallow perforating ulcer about half a centimetre in diameter extending through the pericardium with its base formed by the muscle of the right auricle. Adhesions had shut off the contents of the cyst from the general pericardial cavity.

The appendix is normal, and there are no signs of ulceration or cicatrisation about the stomach or intestines. The liver is somewhat enlarged and cirrhotic. The kidneys show no inflammatory changes.

At the post-mortem the cyst contained comparatively little pus. A specimen was taken for the Bacteriological Department, and direct examination showed, as before, streptothrix filaments, but it was found impossible to cultivate them. From the bacteriological evidence it was impossible to say definitely that the filaments were actinomycotic, but their presence in two separate examinations might be thought to be suggestive.

In conclusion, I wish to thank Dr. Hale White for permission to publish this case.

A. H. TAYMOUR.

Classification of War Neuroses.

By Major A. F. HURST, R.A.M.C.

A. PREDISPOSING CAUSES.

(1) The congenitally nervous or "martial misfits."
(2) A previous attack of neurasthenia.
(3) A previous mental breakdown.
(4) Chronic alcoholism.
(5) Concussion, even years before.

B. EXCITING CAUSES.	RESULTING NEUROSES.	TREATMENT.
(1) Exhaustion, due to— (a) Mental and physical strain. (b) Toxæmia of acute and chronic infections. (c) Insufficient food. (d) Excessive heat. (e) Pain and toxæmia of wounds.	I. Neurasthenia (nervous, suprarenal and occasionally thyroid exhaustion). II. Soldier's Heart.	Rest followed by graduated exercise; sometimes adrenalin or thyroid.
(2) Emotion due to— (a) A single horrible incident. (b) Prolonged and repeated horror, fear, etc. (c) Constant pain from a wound.	III. Psychasthenia (amnesia; obsessions; phobias; tics; nightmares with secondary headache, insomnia and tremor. IV. Hysteria (convulsions, tremors, paraplegia) V. Hyperthyroidism, Hyperadrenalism, with hormonic form of "soldier's heart." VI. Exaggerated Defensive Reflexes (especially "auditory-jump" and "visual-flinch" reflexes).	Suggestion with or without hypnosis. Persuasion, re-education, rarely hypnotic suggestion Rest, opium, belladonna. Quiet and isolation.
(3) Explosion of high power shells— (a) Concussion. i. Aerial. ii. Contact (burial, sandbags, etc.) (b) CO poisoning.	VII. Shell-shock: an organic basis (concussion symptoms), often with super-added hysteria (paralysis, deafness, mutism, blindness, etc.)	Rest for organic basis; persuasion and re-education, rarely hypnotic suggestion, for hysteria.
C.—CONDITIONS PREDISPOSING TO THE DEVELOPMENT OF SPECIAL SYMPTOMS.		
(1) Family or personal history of epilepsy.	VIII. Epilepsy	Bromide.
(2) Mental deficiency (3) Mental disease	IX. Insanity.	
(4) Syphilis	X. Cerebral Syphilis: Tabes: G.P.I. ..	Hg.: K.I.: salvarsan.
(5) Ocular defects, already present or produced simultaneously.	Asthenopia and headaches ... ... Hysterical blindness	Glasses. Hypnotic suggestion.
(6) Aural defects, already present or produced simultaneously.	Hysterical deafness; tinnitus	Hypnotic suggestion.
(7) Previous or simultaneous injury or wound of a limb.	Hysterical paralysis, spasm or tremor of the limb.	Persuasion and re-education.
(8) Previous speech defect (stammering, aphonia, mutism).	Hysterical mutism, aphonia, stammering)	
(9) Excessive smoking	Tremor; "Soldier's Heart."	
(10) Passed emotional disturbances or illnesses, which may since have been forgotten; these may influence III., IV., VI. and VIII.		

Leaves from a Surgical Note Book.

This series of articles, for which no claim to originality is made, are published in the hope that they may be useful, especially at the present time, to men reading for examinations.

Notes on Non-Malignant Strictures of the Rectum.

A non-malignant stricture may be—

1. Congenital.
2. Spasmodic.
3. The result of inflammatory changes in the wall of the bowel.

Congenital stricture is not common, and symptoms may not occur till later life. The stricture is situated in the anal canal at its junction with the rectum.

Spasmodic stricture is extremely rare.

Inflammatory changes in the bowel wall may narrow the lumen in one of two ways:—

a. By a diffuse mucous, submucous, and muscular infiltration such as may occur in the localised gummata, the diffuse ano-rectal syphiloma, and to some extent in diffuse tuberculosis of the bowel.

b. Much more commonly by fibrous contraction which necessarily results from the healing of any deep and extensive ulceration.

Pathological appearances vary with the cause. Congenital strictures are felt as a tight ring. Post-operative strictures of the anal canal are felt as a fibrous ring surrounding the lumen of the bowel; in such cases there is no deep infiltration of the bowel wall. When fibrous stricture results from rectal ulceration, the appearances will vary enormously according to the degree and extent of the ulceration. In the majority of cases which come under observation active ulceration is still present. The stricture is usually within reach of the examining finger, but occasionally it is higher and may be at the junction of the rectum and pelvic colon. It is sometimes annular, surrounding the lumen as a fibrous ring; in other cases contraction takes place on one side only, with the result that the wall is puckered up on that side. Again, in others, a considerable part of the bowel is involved in the contraction. Polypoid masses of infiltrated mucous membrane and submucous tissue may be seen projecting into the rectum. Hæmorrhoids frequently accompany a stricture, and are possibly caused by pressure on the hæmorrhoidal veins. The bowel above the stricture becomes hypertrophied and dilated. Fæcal masses retained above a stricture will cause ulceration or aggravate that already existing.

The symptoms are slowly engrafted on those of ulceration; the passage of fæces becomes increasingly difficult; they are retained above the stricture for a variable time, and then expelled piecemeal, so that they consist of small, hard, isolated fragments. If the stricture is low down near the anal margin, *e.g.*, in congenital stricture or that following operations on the anal canal, the motion may sometimes be flattened or ribbon shaped. This, however, is unusual. Since ulceration is commonly present, blood, pus, and mucus are constantly passed. Even if ulceration be absent, the irritation of fæces retained above the stricture will excite a catarrh of the bowel wall as shown by the passage of mucus and, perhaps, blood.

Patients complain of diarrhœa, the spurious diarrhœa of proctitis and ulceration. Sooner or later symptoms of intestinal obstruction appear: flatulent distension, probably aggravated by food, unpleasant rumblings of wind in the bowels accompanied by colicky peristaltic pains and an increasing demand for purgatives. Later, if the stricture be allowed to progress, the compensation of the colon taxed to its utmost fails, distension progresses, and the obstruction terminates acutely or subacutely. The colon is distended so greatly that its circulation is impeded and infection of its walls results. Local

infective necrosis of its wall may occur and acute perforative peritonitis follow. The perforation will usually be low in the pelvic colon, where distension is greatest and bacterial life most rampant, but it may be, as in any case of colonic obstruction, in the cæcum.

The diagnosis is made by examination with the finger and the sigmoidoscope. Occasionally it is difficult to differentiate simple from malignant stricture. In simple fibrous contraction there cannot be much doubt; but where there is a narrowing of the bowel associated with irregular polypoid masses projecting into its lumen, the similarity to carcinoma is sometimes very great. In the simple disease there is usually a long history of ulceration of the bowel, probably commencing at an age when malignant disease is unusual. The polypoid masses have not the characteristically hard and irregular surface of a carcinoma. If in doubt, a section should be examined with the microscope.

The treatment varies with the site and extent of the stricture and with the presence or absence of ulceration. Stricture in the anal canal may be treated satisfactorily with Hegar's dilators. If the stricture be very firm, it may be necessary to incise it at four points situated at the extremities of two diameters at right angles to one another. Dilatation will have to be maintained for some time, perhaps during the rest of life.

Simple stricture of the lower inch of the rectum may, in the absence of ulceration, be treated in the same manner. Dilatation of a stricture higher up is often a difficult matter, but in the absence of ulceration a soft rubber dilator may be passed through the sigmoidoscope tube. A stiff metal instrument is dangerous, since it may readily perforate the bowel wall and cause perirectal inflammation.

More drastic measures may have to be taken, such as excision or colostomy. W. E. T.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

[We would point out that we cannot *under any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—ED., G.H.G.]

SIR,—I hope you will allow me to voice a protest against your conclusions, in "Passim," on the Food Controller's new regulations.

It is rather disappointing to find it stated in the GAZETTE that the present scale of rations cannot, of course, apply strictly to Guy's owing to the fact that there is no proportion of children among the workers there.

While fully appreciating the enormous strain of work in the Hospital to-day, with increased work and depleted staffs, yet it is difficult to see if Guy's workers are to be allowed a ration in excess of Lord Devonport's allowance why every other worker in the land who is working at full blast and living apart from children should not do so to a similar extent, with disastrous consequences to the national food supply.

Until the Food Controller sees fit, acting on the estimate of the Committee of the Royal Society, to establish a sliding scale for different ages and employments, I maintain it must be considered unpatriotic for any body of workers to consume food in excess of the ration allowed; and I cannot conceive, therefore, why you should consider anyone who keeps within the allowance at Guy's as a victim of injustice.

I agree heartily with your emphasis on the necessity of good and careful cooking as a means of economy, and if all waste is eliminated I think you will find, as many persons have already done, that it is possible, with a judicious use of substitutes, to do a full day's strenuous work on the rations allowed at present.—I am, Sir, yours faithfully,

c/o Admiralty, London, 5th March, 1917. F. G. LLOYD, Temp. Surgeon R.N.

Honours.

Bar to Military Cross:—Temp. Captain Allen Coulter Hancock, M.C., R.A.M.C. For conspicuous good work in advanced dressing station, notably when he successfully conducted evacuation of the wounded under heavy shell-fire and adverse circumstances. Again, when the O.C. was wounded, Capt. Hancock took command, and by his initiative, personal courage, and devotion to duty, was responsible for the able carrying out of wounded through a barrage of shell-fire for six days. He was severely gassed, but persisted in attempting duty until physically incapable.

The Early Diagnosis of Phthisis.

CLINICAL LECTURE BY A. P. BEDDARD.

Gentlemen,—There are few diseases in which an early diagnosis is more important than that of phthisis. It is a well-worn subject, but what I want to try and help you to do is to diagnose cases of phthisis at a really early stage. When I was a student here we only diagnosed cases which we should now consider to be in the last stages of consumption. It is only on account of the disease being early diagnosed that the large numbers of cases are cured at sanatoria.

I am speaking to you to-day on this subject because text-books on medicine will go on teaching students that phthisis is an apical disease, whereas what I want to persuade you is, that at least two-thirds of the cases of phthisis are not apical at all, but start from the roots of the lungs. It will at once be obvious to you that if you are really going to "spot" phthisis in the early stage, it is essential that you should know where the early lesion is. If you are searching for it at the apex, and it is not there, it is obvious that your power of detecting the disease at an early stage will be by so much diminished. It is not easy to give the actual proportion of cases in which the lesion is apical and that in which the roots are attacked, but from looking at consecutive series of skiagrams taken at a large hospital like this, it seems that the proportion I have given you is about right: two-thirds are root of lung cases, one third are apical at the commencement. And it is not merely that there is an anatomical difference between the cases at these two sites, there are differences from almost every point of view. The apical case has a totally different prognosis, and its symptoms are very different from those in the root cases.

To take, first, those cases of root phthisis, or, as they are called, cases of peribronchial phthisis. What starts at the root in these cases is a peribronchial fibrosis. These cases have nothing to do with broncho-pneumonia, nor with any breaking-down process in the lung: it is a tuberculous lesion which slowly transforms the lung into a fibrous and somewhat airless mass. It spreads along, and follows the distribution of the bronchi. That is to say, having started from the roots, there are two great lines of spread. And it is important to know this, for, after all, the physical signs will follow the lines of spread of the disease. One great direction of spread is up to the apices, so that in this form, the apices are one of the last parts of the lung to be involved. The other chief direction of spread is downwards and outwards into the lower lobes, with also a certain amount of spread laterally.

What, then, do the people who have this trouble come to the doctor complaining of? And how can you detect it when you are confronted with such a case clinically? It is the method of doing this that I want to explain to you.

The two symptoms which are almost universally complained of in this trouble, neither of them connected with the chest, are, first, tiredness: they will tell you that for a year or so they have always felt tired. Secondly, they will speak of having lost weight. Either of these two symptoms alone does not mean much. After all, there are some people who were born tired, and all the Weary Willies in this world are not suffering from phthisis. But when you find these two combined, the tiredness having been felt over a number of months more or less continuously, and the loss of weight having been progressive, that should be a good reason for a careful examination of the lungs. Even taken together, I admit that these two symptoms might mean diabetes or a number of other conditions,

but, at any rate, you will examine such a person's lungs with great care. As a rule, these patients, in the early stage, do not complain of anything else; they have no sputum, or, if they have, it does not contain tubercle bacilli. These are not the people who complain of hæmoptysis, or anything of that kind. How, then, can you spot these as cases of this particular brand of tubercle? Remember this is the stage which is so easily curable, though it takes a long time. There are two things which, as a rule, you have got to demonstrate, and which, if you can demonstrate both of them, will tell you precisely where you are in the case. One is a change in the physical signs. If you once realise that you are dealing with a disease which is oldest and most marked at the roots of the lungs, to merely look for physical signs at the apices is not sufficient. When you go over the chest of one of these people in a routine way, you generally find that by inspection and palpation you detect nothing at all; the movements of these chests at this stage are usually normal and equal. To spot the trouble, you rely first upon percussion, next upon auscultation.

What part of the chest is it the percussion of which tells you that there are changes in the lungs of these people? It is nothing in front; for I am speaking of the stage when the patient comes with this vague tiredness, and what he regards as a trivial ailment. The only place where you can demonstrate changes in percussion in these people is in the back of the chest. Where at the back? I need scarcely tell you it is at the roots of the lungs. What do you get from the percussion of a normal back? If you get a person to lean forward and fold his arms, so as to get the shoulder blades out of the way, and the muscles arising from the shoulder blades tight and well stretched, and then you percuss two or three inches from the spine, from top to bottom of the lung, you will elicit an uniformly resonant note; there is no change in the quality of the note at any spot. If you do the same in the case of one of these people with root tubercle, then somewhere in the region of the fourth dorsal vertebra—which is about the middle of the root of the lung—you come across an area over which the percussion note, instead of being uniform with that elsewhere, is of decidedly higher pitch, in other words, a part where it is less resonant. That sounds easy to do, and if you will practise it, it is easy enough, but you must carefully train your ear to appreciate slight differences in pitch. In these people we are considering you will find an area of higher pitch, it may be a band three or four inches long. Beyond that area, there is a drop to the note which you elicited in the rest of the percussed region, until you get off the lung area altogether. When you have demonstrated that by percussion—and, as a rule, it is about equally marked in both lungs—it means the person has definite changes in the lungs confined to the roots. But that, for all you know, might be old trouble; it does not prove that the disease in the area indicated is active. That is what you have next to do, to ascertain whether the root trouble is old and quiescent or recent and active, and, therefore, the cause of the person's want of health, as it is only when tubercle is active that it produces the disturbance of which the patient complains.

The showing whether there is activity depends on two things: one is the changes on auscultation, and the other the constitutional disturbances, the most important of which is temperature. If it is in the active stage, what are the auscultatory signs which you hear over this altered lung and along the distribution of this active tubercular process? They are nothing to do with changes in the breath sounds; the breath sounds over these chests are normal. The only auscultatory sign in these really early cases of tuberculosis, such as we are considering, are adventitious sounds, in the shape of

fine, sticky râles. I think, if you are expert at it, that merely detecting, for certain, these râles in one part of the chest, will enable you to say the person has peribronchial phthisis. The point where you want to begin to listen in such a case is, obviously, over the root of the lung. Then you see if you can trace these up towards the apex; also if you can trace them outwards, past the angle of the scapula, you listen in other parts of the chest as well. Supposing these sticky râles are almost confined to this distribution, and going upwards towards the apex, and outwards towards the base, and are not audible in other parts of the chest, then what you have shown is that the person has got active mischief. I know no other disease which has this distribution in the chest. It is only fair to warn you that these râles are not numerous; they are not crackling râles which you come across by the dozen. You must listen carefully to the breathing. You may hear them at one spot, but not always at that spot; a few minutes afterwards you may not hear them there, but they are at another spot. It takes a long time to examine one of these chests, a hurried examination will cause you to miss the whole thing. Remember if the lesion is an old one, *i.e.*, if it is in a quiescent stage, the change will still be evident by percussion, but there are not then the sticky râles, the chest is dry.

The other means of determining whether these people have got active tuberculosis is by the temperature. And the only temperatures which are of value from this point of view are the rectal temperatures; mouth temperatures are no guide. The reading of a thermometer which has been left in the rectum three minutes will give you the blood temperature.

What are best times in the day for taking this temperature? The best and most important time for taking the temperature is in the morning before the patient has been out of bed at all, say, at 8 a.m. Directly bodily activity starts, an alteration in the internal temperature of the body is produced; meals, and all sorts of other things, alter it, too, so that the number of fallacies is great. The fallacies before the patient gets up, however, are few. If you take the rectal temperature of 50 or 60 healthy people just before they get up in the morning you will find it varies scarcely half a degree. The temperature of normal persons at this time of morning is something less than 98·4° F.; in many people it is 98°, in some 97·8°. But at 7 o'clock in the evening of a person who is up and about, as your early case probably is, there is an enormous variation in the temperature found; you cannot state any figure as constant, as you can for 8 o'clock in the morning; but if it is uniformly over 100° you may definitely put it down as pathological. Normal people, unless they have within an hour of the examination been taking violent exercise, such as walking fast against a strong wind, would not have a temperature as high as 100°. If it can be done, the best thing is to get the man or woman to lie down from, say, 6 to 7 o'clock, and then take the temperature. If after such an interval of rest the patient consistently runs a temperature of 99·5° in the evening, you may regard that as pathological. Remember you are going to base a great deal on the temperature charts. You may be doubtful about your auscultatory physical signs, or, as is sometimes the case even with much experience, you may be in doubt as to the changes revealed by percussion. And when you are in such doubt, it is the temperature observations on which you will rely, because, at this stage, you are not going to get help from the sputum.

What are the fallacies connected with this taking of the temperature? The most serious fallacy is that which is found in the female sex, and it has to do with the internal changes connected with the process of menstruation. About 80 per cent. have a pre-menstrual rise of tem-

perature, *i.e.*, their temperature, taken in the way I have mentioned, is found to be slowly rising from day to day, and the influence is seen in both morning and evening readings; so that just before the commencement of menstruation the morning temperature may be 99° and the evening reading 100°.

The period during which this pre-menstrual rise of temperature occurs may vary from less than a week to nearly three weeks. One of the means of knowing whether it is a pre-menstrual rise is, that on the very day that menstruation sets in, the temperature at once comes down to normal. I have seen charts of temperature due to this looking like those of Malta fever. In some women the only time during which their temperature is normal is while they are actually menstruating. A three weeks' pre-menstrual rise is exceptional, about a week to twelve days is the usual variation. Hence, when a woman consults you and you suspect early tuberculosis, you must know what her physiological temperature is, and this means you must have a three weeks' chart. About 10 per cent. of women have no pre-menstrual rise of temperature, but have a menstrual rise, *i.e.*, their temperature is normal until they start menstruating to drop to normal when that process has ended. About 10 per cent. of women appear to have no temperature disturbance in connection with menstruation at all, though I have not yet seen such a case. The statement emanates from a sanatorium, where temperatures are taken as a routine procedure. There is no corresponding trouble about the temperature in the male sex. If in a man you find a high internal temperature for a week, coupled with the suspicion you form on examining his chest, you have enough to diagnose tubercle upon.

The next question which arises is: Are the X-rays of any help in the diagnosis of this state of things? My experience is definitely this: that if you are good at eliciting physical signs, X-rays are of no help to you whatever. I mean if you can demonstrate this early disease so can the X-ray man. If you are uncertain about it, he is in as great uncertainty about it. But if you are not good at these physical signs, then the X-ray man may be of considerable help to you. But you have to remember this about X-ray examination: the rays tell you that the lung is altered in its optical properties, but they do not tell you whether the alteration is twenty years old and "as dead as mutton," or whether it is recent and extremely active. A person who has had peri-bronchial fibrosis and has been cured of it for years will show almost the same X-ray picture as will a person who has got the disease in an active stage. You would get the X-ray picture and then look to the rectal temperature to tell you whether the disease is active. X-rays are very valuable, but, of course, they are cumbersome, and I strongly urge you not to rely on these mechanical means. Learn to do the thing well with the aid of your fingers and a stethoscope.

Contrasted with those cases which, in England, constitute two-thirds of the cases of phthisis, there are the apical cases, those in which the lesion commences at or near the apex, which are fully described in text-books of medicine. Here you are dealing with a disease in the lung substance; it is a form of slowly spreading broncho-pneumonia, which tends to caseate and cavitate. These cases will be different from the foregoing in many respects. A person who starts with any form of broncho-pneumonia will have cough as an early symptom; often these people have hæmoptysis as an early symptom. The apical cases have sputum early and tubercle bacilli are evident early on microscopical examination. These apical cases are much more serious, for in them the prognosis is worse, and the treatment must be more drastic and be persisted in longer if they are to have even a

moderate chance of cure. Most of these patients have bad family histories, and their resistance to tubercle, as compared with the general cases of phthisis, low. When you become expert at physical signs, nothing will strike you more than the great number of human beings who have got impairment over the roots of their lungs. Your great difficulty in practice will be this: of all the people you see who have got impairment over the roots of the lungs to decide to which of them it is necessary to say anything about the state of things. But if you can demonstrate an active lesion at the apex of a person's chest and nowhere else, you cannot advise that person to take too great precautions at once, because the outlook in such cases is often bad; it is very much more serious than in the other type of phthisis.

What is the treatment of one of these cases of root tubercle in the early stage? What is it necessary to tell the patient to do in order to throw the disease off? The patient wants to know how long he will require to undergo treatment before he gets well. The unfortunate thing about tubercle is, that however benign a form it may be, the human body cannot kill off a tuberculous process rapidly. I do not think it can be done under two years, however benign the particular case may be. In the case of people who have had tiredness for about a year with progressive loss of weight, the conundrum is, how to get them in a really good state of health and keep them in that state for two years. These people will want to know what is the least they will have to do in order to get into that necessary state of health. The loss of weight and the feeling of tiredness are results of the intoxication from the active tubercular process, and the only quick way of stopping that is for the person to go to bed. This will not be popular advice to people who are actively going about, but you must point out that it will really save such an enormous amount of ill-health and time. I do not say that people who do not go to bed will not get well; some will get well if you do nothing at all. But the way to get quickly in a better state of health and to become apyrexial is to go to bed.

How long they must remain in bed depends on more things than the activity of the disease, though the more active the trouble, the longer the patient must be in bed in order to get a normal temperature again. But you will soon realise, in practice, that that is not the whole story: to be able to convert oneself at will into a contented cabbage is not equally within the power of everybody, and to take a person from active life and put him to bed with nothing to do is not easy. Many people do not settle down in sanatoria, they "kick against the pricks," and chafe at their conditions continually. Such persons will keep up an abnormal rectal temperature longer than the contented person with the same degree of disease. Some people are very exasperating from this point of view. One person will get a normal temperature in a fortnight while another will require six months. The best thing is to tell the patient he must go to bed until his rectal temperature is normal, and that the sooner he or she becomes contented, the sooner that will occur, and then they will be on the high road to recovery.

Pass List.

Royal College of Surgeons of England.

LICENCE IN DENTAL SURGERY.

The Board of Examiners in Dental Surgery report to the Council that the following candidates, having fulfilled the requirements of both Sections of the Board, are qualified to receive their Diplomas, and recommend that the Diploma in Dental Surgery be issued to them accordingly:—C. C. Becker, G. H. Danks, D. E. Robinson.

Cases of Liver Abscess.

When working at Victoria War Hospital, Bombay, I saw four cases of liver abscess, all of which were operated on, and subsequently died. As the type of abscess which has to be dealt with in Bombay may differ from that which is sufficiently chronic to reach England, a short summary of the cases may be of interest. The following account is not taken from notes written at the time, and therefore is not minute in detail.

The diagnosis was in all cases a matter of some difficulty, and the symptoms were similar to those mentioned in Mr. Fagge's article in Guy's Gazette some months ago. The exploring needle was used both as a final effort to prove the diagnosis and as a method of localisation should pus be found.

In cases where the abscess was situated in the right lobe, the usual operation through one of the lower ribs was performed. It should be explained that in these four cases the patients had not recovered from dysentery when the abscess formation supervened, and that for this reason they were far from being fit subjects for lengthy operation. No attempt, therefore, was made to sew the diaphragmatic to the parietal pleura. I may mention here that in the opinion of the surgeon who operated (Captain A. Hamilton, I.M.S., F.R.C.S.) this proceeding was unnecessary as he had never seen any ill effects due to its omission.

One case differed from the others in that the abscess was situated in the left lobe. It had burst intraperitoneally, and formed a localised abscess. There was no difficulty here in suspecting the left lobe as a visible swelling was present to the left of the epigastrium.

On operation, the pus on each occasion was found to be of a pale yellowish-green colour, not at all like the "anchovy paste" colour of the more chronic abscess. It has been stated that the constant and free staining of the post-operative discharge with bile is a bad prognostic sign, and the few cases I saw bore out this observation, the presence of bile in the discharge being a marked feature in all. The discharge was also exceedingly profuse, and in one case in particular a sudden and enormous increase in its amount was noticed a few days after operation. This was thought to be caused by a second abscess bursting into and discharging through the old one. I fail to remember if this was proved at the post-mortem. This man gave a positive Widal (1—100).

Another man showed signs of peritonitis a week after operation, but was far too ill to have anything further done. It was suggested that some of the pus may have leaked down between the right lateral surface of the liver and the parieties. This was proved to be correct at the post-mortem, when it was seen that there had been no attempt at the formation of adhesions between the hepatic and parietal peritoneum. The patient had been too devitalised by his prolonged illness for this to occur. The peritonitis was only slightly marked, and was entirely posterior, showing that the pus had merely gravitated, the lack of peristalsis for some hours before death had prevented its dispersion.

Perhaps the most interesting, but at the same time most disheartening, information was to be gained from the post-mortem appearances of the liver. The abscesses were found to be multiple in every case. There is generally one abscess cavity larger than the rest, and this is the one most often opened into by the surgeon. The liver, apart from the larger abscesses, resembles very much that seen in suppurative pylephlebitis except that here one sees practically no normal-looking liver tissue. In bad cases it is simply one breaking down suppurating mass. All the stages of abscess formation can be seen from small necrotic foci to abscesses containing an ounce or more of pus; the largest (and it is generally much larger than any other) may contain from half to a pint of pus.

The walls separating the abscesses have often broken down, allowing them to communicate. The largest may have been formed in this manner or from a single focus.

Another point of interest is that in these cases the walls bounding the abscesses are soft, friable, and sloughing, and contain no fibrous tissue at all. As the abscess grows, the adjacent liver cells are not compressed by it, but break down so that the increase in size of the cavity is due chiefly to the necrosis of its walls. Perhaps this immediate connection between the liver cells and the cavity explains the above-mentioned staining of the discharge with bile. One might say, therefore, that in cases where the discharge is freely stained with bile, the abscess is of the acute progressive type with the possibility of many more being present.

It was obvious from the appearance of these livers that they must have been practically functionless. One would imagine, therefore, that some knowledge of the condition of this organ might be gained by the estimation of the urea in the blood. This, I should think would be very low, because its formation by the liver *must have diminished enormously*, and as the patient has been confined to bed for some time, very little ought to be formed by the muscles. This investigation would only be of use, of course, in the acute type of abscess where nearly all the liver is involved, and yet where the diagnosis of any liver trouble is even more difficult than in the delayed variety owing to the abscess formation starting insidiously at the end of a bad attack of dysentery. All the observer notices here is that the patient's

condition steadily gets worse, nothing in particular happening to draw his attention to the liver. If the above suggestion regarding the urea in the blood be correct, then the estimation might be made in those cases of dysentery where the illness is prolonged (although actual dysenteric symptoms may have disappeared), and the gradual decline in the patient's general condition shows that some grave error in metabolism is present.

J. GAYMER JONES,
Lt. R.A.M.C.

Appointments.

Medical School Appointments.

APRIL–JUNE, 1917.

Dressers or Clerks in Special Departments:—

A. *Throats* (Mr. Mollison). *Orthopædics.*—Messrs. C. W. W. Armstrong, F. W. Reitz.

B. *Throats* (Mr. Layton). *Genito-Urinary.*—Messrs. F. Caldecott, R. S. Millar.

C. *Children, Eyes* (Mr. Eason).—Messrs H. G. Burford, A. Y. Massouda, W. H. Steavenson.

D. *Skins, Nerves, Eyes* (Mr. Ormond).—Messrs. L. S. Debenham, J. C. Gie, N. Kamchorn, S. Wolff.

Obstetric Dressers.—Messrs. W. Gover, W. H. Grace, W. A. Hawes, H. O. Long, G. Meadows, A. L. S. Payne, R. T. F. D. Roberts (Mr. Bellingham Smith); A. R. Doyle, T. Fernandez, W. A. Flynn, O. Halstead, A. G. M. Severn, R. C. W. Staley, G. A. S. Shacklock (Mr. Chapple).

Surgeons' Dressers.—Messrs. C. L. Curle, J. Joffe, G. V. Richards (Sir Arbuthnot Lane); H. F. G. Berncastle, F. K. Escritt, G. M. Thomas, J. E. van der Merwe (Mr. Dunn); C. Gill-Carey, A. R. Neckles, W. H. Simmons, S. A. Withers (Sir Alfred Fripp); E. F. Kerby, E. H. L. LeClezio, C. G. D. Siggs (Mr. Steward).

Extension Medical Ward and Post-mortem Clerks.—Messrs. G. R. Aspinwall, R. S. Ralph (Dr. Hale White); T. G. D. Bonar, S. H. Robinson (Dr. Shaw); C. Moffatt, R. W. Warrick (Dr. Fawcett); W. H. Cellier, G. F. Peters (Dr. Beddard).

Assistant Surgeons' Dressers.—Messrs. J. Kendall, K. Mullen (Mr. Fagge); C. H. Horwitz, H. M. Brown, L. Lyne (Mr. Rowlands); H. W. Southgate, E. R. Webb (Mr. Hughes); G. A. Bradnack, G. Hume (Mr. Bromley).

Medical Ward Clerks (first three months). Messrs. S. T. Barrett, P. J. Briggs, C. V. Brown, W. G. Hay, M. F. Ismail, R. B. P. Lansdown, A. M. Mishad, H. S. Morris, H. N. Schapiro.

Surgical Ward Clerks.—Messrs. L. Burvill-Holmes, R. C. B. Ledlie, A. E. Sawday.

R.N.M.S.

The following appointments have been made:—Temp. Surgeons G. Hamilton, M.S., to Haslar Hospital, F. C. S. Broome to the *Drake*, E. J. Tongue to the *Pembroke*.

R.A.M.C.

To be temp. Captains:—W. O. Roberts, L. G. Reynolds, A. Traill.

To be temp. Lieuts.:—H. H. Moyle, H. Harrison, N. Garrard.

Officer relinquishing his Commission:—H. W. Doll.

Special Reserve of Officers.

To be Lieutenant:—F. R. Leblanc.

I.M.S.

Lieut.-Colonel W. H. Ogilvie, M.B., promoted to temp. Colonel whilst holding the appointment of Assistant Director, Medical Services, with effect from Sept. 2nd, 1916.

Civil.

T. D. Lister, M.D. Lond., F.R.C.S. Eng., has been appointed Consultant for Chest cases to the Prince of Wales' Hospital for Officers, Marylebone Road (Great Central Hotel).

A. H. B. Kirkman, F.R.C.S. Edin., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Axmouth District by the Axminster Board of Guardians.

Papers by Guy's Men.

Kenelm H. Digby, M.B. Lond., F.R.C.S. Eng.: A note on the suturing of fractured bones by absorbable ligatures.—*The Lancet*, March 10th, 1917.

Lieut.-Colonel C. H. Wenyon, R.A.M.C., in collaboration with Capt. F. W. O'Connor, R.A.M.C.: An enquiry into some problems affecting the spread and incidence of intestinal protozoal infections of British troops and natives in Egypt, with special reference to the carrier question, diagnosis, and treatment of amœbic dysentery, and an account of three new human intestinal protozoa. (Part II., continued from p. 34).—*Journal of the R.A.M.C.*, Feb., 1917.

Temp. Major Arthur F. Hurst, M.A. Oxon., M.D., F.R.C.P., R.A.M.C.: Trench fever. A relapsing fever occurring among the British troops in France and Salonika.—*Ibid.*

Major Alfred J. Hull, R.A.M.C.: The treatment of gunshot wounds by packing with salt sacs.—*Ibid.*

Temp. Lieut.-Col. G. A. Wright, F.R.C.S., R.A.M.C.: Amputation and re-amputation.—*Ibid.*

Percival P. Cole, M.B. Birm., F.R.C.S. Eng.: Plastic repair in war injuries to the jaw and face.—*The Lancet*, March 17th, 1917.

F. N. Doubleday, L.R.C.P., M.R.C.S., L.D.S. Eng.: A case of severe septic infection of dental origin: Operation—recovery.—*British Dental Journal*, March 15th, 1917.

The Work of a Field Ambulance.

The following remarks, it is hoped, will make it easier for any medical officer previously untrained to find his feet if he has the good fortune, for in my opinion it is far the most interesting job, to become attached to a field ambulance.

In each division (approximately 20,000 men) there are 3 F.A.'s. These units are under the orders of the A.D.M.S. of the division. The D.D.M.S. of a corps and the D.M.S. of an army are corresponding positions. The A.D.M.S. is responsible for the issuing of orders to them. The personnel consists of ten officers, one of whom is the quartermaster, and 242 other ranks. It is formed of three sections, approximately equal in size, who are supposed to be able to act independently, but the sectional arrangements are usually not considered.

Attached are 31 A.S.C. men for work with the transport, 12 of whom are M.T. men to run the cars and dispatch riders.

Transport.—3 horse ambulances, 6 G.S. wagons, (2 per section), 4 limber carts (1 for cooks), a Maltese cart, and 3 water carts. 7 motor ambulances (2 light Fords, 3 bigger cars, Sunbeams, Siddeley, Deasy, or Vauxhalls), and 2 motor bikes.

Equipment.—It would be impossible to give a full list, but one has everything from a trephining saw to a maul or a shoeing forge to a hypodermic syringe.

We will now consider the work of a field ambulance in three different conditions: When the division is (a) at rest; (b) holding the line; (c) advancing.

(a) *An ambulance at rest* is attached, one to each infantry brigade, and then one settles down to make oneself comfortable and to enjoy this well-earned respite. A small hospital for 50 or so patients is improvised out of such accommodation as is available, usually an empty barn or loft, and with the aid of our equipment and the British Red Cross Society quite a comfortable ward is made. The walls are lined with canvas, cocoanut matting is put on the floor, and the beds are stretchers on low trestles. Annexes are screened off with canvas, and an improvised stove made out of oil drums serves to warm and dry the place. A little paint and whitewash makes the whole look much more pleasing. Football, boxing contests, etc., keep the men fit and amused, and the rest gives one an opportunity to overhaul equipment, and to repair and replace it.

(b) *In the line.*—Here the three field ambulances take up their different duties. One usually runs the line in the following manner. There are two advanced dressing stations and the main dressing station worked by this ambulance. The bearers are attached to one or other of the A.D.S., and are posted to dug outs near those occupied by the regimental medical officer. Their duty is to bring the cases from the regimental aid post to the advanced dressing station, and this they accomplish in the most expeditious manner. Usually part of the carry is by hand, but light tramways, stretchers on wheels or Ford ambulance cars are often responsible for the majority of the carry.

At the A.D.S. dressings are inspected, and, if necessary, renewed. Anti-tetanic serum is given, and the wounded get hot drinks. They are now well wrapped in more blankets and put in larger ambulance cars and sent to the main dressing station. At this place, which is the ambulance headquarters, they are kept for 24 to 48 hours and then evacuated by by motor ambulance convoy cars to the casualty clearing station. Urgent cases, of course, are sent direct to the clearing station from the advanced or main stations. Sick are dealt with in the same way, except that if they have a chance of being fit for duty in ten days they are sent to the divisional rest station.

The divisional rest station is run by the second of the F.A. The advantage of this station is that an enormous economy in men is achieved and sick wastage from the division considerably decreased, as men are sent directly back to their units when fit. It is usually 7 to 10 miles behind the line in a large building, school, or civil hospital, if possible, and their accommodation is increased by the erection of huts or marquees. They usually can accommodate 200 to 300 cases. They get rid of their cases in three ways: cases not showing much improvement after 6—8 days, or cases of serious disease are sent to the C.C.S. Men fit for duty are returned to their units, and men wanting a week or so of convalescence are sent to the divisional convalescent company. This unit occupies its time in road repair, scavenging and such like jobs.

The third field ambulance is in reserve. They usually run a small hospital on the same lines as the D.R.S., and take in cases from units such as the divisional ammunition column, supply column, and other units lying far back, and if a brigade is in rest they take in their sick. They also have working parties in the trenches improving dug-outs, etc., and may send personnel to help either of the other field ambulances. Occasionally they may take all cases of scabies or trench feet or such like cases.

(c) *In an advance.*—The three ambulances each send up their bearer sub-divisions, about 9 medical officers, and 350 other ranks to work under the ambulance in the lines. Many men are attached to the regiments as in ordinary times. The bearer sub-divisions are responsible for keeping in touch with the R.M.O. and in evacuating cases to the advanced dressing station. If the attack is completely successful, one or more bearer sub-divisions and their necessary equipment are moved up to establish new dressing

stations, usually where previously an aid post had been and now the bearer sub-divisions evacuate to this new position.

The old A.D.S. now becomes the main dressing station. The most difficult job is perhaps that of an officer-in-charge of a bearer sub-division, and a few remarks are not out of place. He has nine squads of four men each and a sergeant. Each squad should have a stretcher, waterbottle, and between them should carry about 20 shell dressings. Surgical haversacks are unnecessary, but a strong pair of scissors should be carried by each squad. If the weather is cold, it is a good plan for each squad to carry two blankets. The officer should have previously reconnoitred the ground, and should know thoroughly the ground between the A.D.S. and the regimental M.O. When the advance starts his men should be at either of these two positions. He should see the R.M.O. and find out from him where he thinks he will establish his next aid post.

A good plan is to send two men on with the M.O. when he advances, so that they can come back and guide up the bearers when they are wanted.

It is a point that is often discussed as to how much the officer-in-charge should accompany his bearers. Any party more than five squads should, I think, be accompanied by an officer, but so much depends on the conditions and the efficiency of the N.C.O.'s that it is impossible to lay down a rule. The great thing to bear in mind is that communications must be kept up with the R.M.O., and that the bearers must be kept steadily at work and not get wandering off and getting lost. These two things must be accomplished, and the officer if he is satisfied that they are being done can please himself as to when and how often he accompanies bearers. He should also see that the A.D.S. knows how many casualties to expect, and if his bearers are adequate to deal with them. Once cases reach the A.D.S. the difficulty is practically over, and so the whole onus rests on the R.M.O. and the officer-in-charge of bearers.

E. B.

Letters from Old Guy's Men on Active Service.

Sakrichah Post,
near Kurnah,
Jan. 5th, 1917.

This place is much as I expected. There is a garrison post on the river bank with a camp on one side for the troops marching up country, and on the other side a camp for the pioneers and railway coolies who are working on the line. There are three British officers (pioneers and railway) and we mess together in a small mud hut, but I am the only British officer living in the post, so I get a lot of office work, and am becoming quite an expert on army forms dealing with rations, pay, etc., and at sending in returns in duplicate and triplicate. Apart from the three officers, all of the Indian Army, and one R.A.M.C. orderly, all the troops are Indians, and as I could not speak a word of Hindustani when I came here, it was rather grim. I have a dresser who speaks broken English who has been most useful, but I am beginning to pick some up now. I was getting a very low opinion of the Indians when I was down at Basrah, as one mostly came across clerks and odds and ends sent out as labour battalions, but the detachment of pioneers (Sikhs and Jahts) have made me change my mind. One of their havildars who was through all the Kut fighting is a splendid man, and, taken as a whole, they seem a very good lot.

I expected to find myself reduced to a very low standard of comfort when I came here, but I can't say that I have. I have an E.P. tent to myself on the river bank, and to-day I have just made myself a table out of three long railway sleepers and two boxes. Covered with a blanket it looks quite well. Of course, one is very lucky to have a tent, as there has just been a most tremendous storm with thunder and lightning every minute, and our mess hut, which has a mud roof, is one enormous pool. Except for these heavy storms which we have had at intervals the last three months, the weather could not be better and the winter here seems to be just about as pleasant as the summer is unpleasant. However, in a month or two we expect the river to rise six or ten feet, and this will put practically the whole country round, except the camp, the railway embankment, and some Arab villages under water. From this you can see that there is not much in the way of a hill, and here there are no trees, nothing more than a very few of the date palms which grow in such millions around Basrah.

I have not said anything of the work here, and there is not much to say. I have a sick parade of about twenty each morning (mostly back surgery work and bronchitis and diarrhœa and dysentery) and a hospital tent with six to a dozen patients. Although the place swarms with mosquitoes—you can sometimes count hundreds in a tent—there is not much malaria here, as they are the wrong sort of mosquito, a particularly large culex with a very virulent bite. The main part of one's work is sanitary, and I spend most of my time going round trying to keep the place clean. One of the incinerators, like a miniature St. Paul's, is quite a feature of the landscape. I have the same sort of work at a smaller camp about four miles away, but if it was not for all the official correspondence, one would have quite an easy time.

We had a great time on Christmas day, with sports for the local Arabs, and distributed old clothes and cigarettes as prizes. We cooked our own dinner to

make sure of it being good, and in spite of this it turned out well. The main items were Tigris salmon and two ducks which we had been fattening up for weeks in the camp. On New Year's Eve we were so inspired by midnight no heelers of whiskey, that we then proceeded to a supper, and which almost rivalled the dressers' room.

We see a good deal of the Arabs here, as hundreds of them are working on widening the embankment. They get very good pay, but still seem more excited about the distribution of a few dates at the end of the day, for which they fight like anything. I do not like the Arabs here much, though they are generally of rather good physique, but they do not seem to know anything at all except how to make really waterproof reed huts. Their flat cakes look horrible, like a very inferior and dirty oatcake, but they are not bad at catching fish and you can buy quite a large fish for an anna. Here the women go about quite freely, in fact they do most of the work on the railway, while the men call themselves overseers and turn up about pay time, but in Kurnah, a moderate sized town twelve miles away, you never see a woman's face.

About half way between here and Kurnah the ground is lined with trenches where Townshend defeated the Turks on his march up to Kut. I expect you have heard nearly as much about the December fighting as we have. It seems to have been very successful as far as it went without very many casualties.

MAURICE CAMPBELL.

Maharajah Gaekwar Officers' Hospital,
Malabar Hill,
Bombay,
1st February, 1917.

Bombay is a place a good many people pass through for Mesopotamia, and so on.

I expect by this time Barber will have turned up at Guy's. The last time I saw him was on a hospital ship just as he was leaving for home; just then I was off for a trip to Dar-es-Salaam, in German East Africa, on a hospital ship for Indian troops.

McNair is in Bombay now, and lives in the same bungalow with me. This is a new hospital for officers, to which I am the physician. It is a gorgeous palace, but a rotten job. The place has been lent by the Gaekwar of Baroda, and as far as situation, equipment, etc., could not be better; but looking after officers is a poisonous trade. I was three months in a bacteriological laboratory at Parel, and liked that very much better.

Davies-Colley was staying in our bungalow for some months, but has now been sent back to Mesopotamia as consulting surgeon at Amara—a very good appointment. He has put on weight tremendously since coming east of Suez, and now is quite immense.

We have got several Guy's sisters out here, and one is constantly meeting familiar faces. Minns is stationed in Bombay, and has a D.S.O. as well as M.C. He seems to have done extremely well in Mesopotamia last year. H. N. Eccles is X-ray man at one of the Bombay hospitals, and made himself very conspicuous and popular at Christmas time, on the approved model. He came up to Parel one day dressed as a Borough woman, and made a great sensation.

The Mesopotamia show seems to be doing rather better than usual just now; at all events, not so badly as one has become accustomed to expect.

Polly Perkins is the naval surgeon here; he says he is going to chuck up the navy after the war, and go into general practice.

The GAZETTE does not contain much of interest these days. I expect it is difficult enough to keep it running at all. I suppose you are in a very bad way in the matter of food, etc., just now. My people write lugubriously about meatless days, with no butter or sugar.

TREVOR B. HEATON.

[We apologise humbly for the deficiencies of the GAZETTE, but wish to remind our readers of the old difficulty of making bricks without straw. Perhaps more of them will help us in the future.—Editor, G.H.G.]

Victoria War Hospital,
Bombay,

I am just dropping you a few lines, as I thought you would be interested to hear where I am. I did not go to France after all—the order was cancelled at the last minute. I then got orders to go to Mesopotamia, but when I got to Bombay I was sent on to Burma in medical charge of a batch of Turkish prisoners. I had three very interesting days on my way back in Rangoon. When I got back to Bombay I found that some one else had gone to Mesopotamia in my place, and I was kept in Bombay. I got appointed to the Victoria War Hospital. I have met several Guy's men here. The first man I saw was Barber. I also saw J. G. Jones and E. N. Glover on my arrival in Bombay. As a matter of fact, Jones is the man who has gone to Mesopotamia in my place. Glover has also gone up the Gulf now. Heaton is also out here.

I am in the surgical ward at the Victoria Hospital, and I have had the good luck to do a few operations. Most of the operations have only been minor ones, such as scraping sinuses. I always assist Capt. Hamilton, the surgical specialist to the hospital, at all his operations. The first operation I did was to amputate a leg, but we were too late to prevent septicæmia, and the boy died after ten days.

About a month ago the surgical specialist went away for a week's leave, and I was left in surgical charge. During that time we had two acute abdomens sent in. The first one was a second attack of appendicitis. He

had a temperature of 103·6°, pulse 136, and a definite lump. I diagnosed an appendicular abscess. I got the colonel up to see the case, and he agreed with me and told me to get on with the operation. I was rather nervous at first, as I had the colonel in the theatre watching me. It was not at all easy, as there were adhesions all round the cæcum; the appendix was retro-cæcal and adherent everywhere; the tip was gangrenous and an abscess was just forming. However, after sweating like blazes fos some time, I managed to get the brute out at last. The colonel complimented me on the operation, but he criticised the incision. I used the vertical incision, through the right rectus. I don't think I could have got the appendix out through any other incision. The patient has made a complete recovery. The other one was another appendicular abscess, which was very simple compared to the first one.

At the present moment I am a patient at the Colaba Station Hospital, recovering from an attack of malaria —they found "Benign Tertian" in my blood. I am quite convalescent now, but I was very seedy for a week.

I have seen two or three liver abscesses operated on out here, but they were all attacked from the front through a small incision about an inch and a half long, just below the right costal margin.

VALENTINE R. HIRSCH.

Reviews, etc.

Ligations and Amputations. By A. Broca. Translated by Ernest Ward, M.A., M.D., F.R.C.S. (Published by Messrs. John Wright & Sons, Ltd., Bristol.) Price 8s. net.

Now, when amputation and worse still re-amputation is so appallingly frequent, it is somewhat disappointing on receiving a newly-published work on the subject to find so little that is new.

Professor Broca's book contains little but the usual stereotyped descriptions of the usual classical ligations and amputations, many of which are of no use outside an examination hall and never performed outside an operative surgery class. So conservative is he in his treatment of the subject, that when he strays from the beaten track by so much as an extra half inch on an incision he hastens to assure the reader that it is "a modest trick that will never count against a candidate in an examination."

The chapter on "The choice of operation and the artificial limb" is written with the old pre-war disregard of the requirements of the modern artificial limb maker, which almost seems to justify Mr. Fagge's dictum that nothing finds its way into the surgery books until ten years after it has gone out of fashion. Nevertheless, this conservatism comes as rather a shock after the assurance in the preface that the work embodies "the information gathered by the Professor from his recent war experience"! We do not know what the Professor's war experience has been, but we do know what the Roehampton opinion of some of the classical amputations, particularly those about the foot, is—quite unprintable.

As regards the description of operation: every detail of the various operative procedures is described most minutely, and almost every stroke of the knife is figured in the numerous admirable little illustrations scattered throughout the text. As may be imagined, this wealth of detail, though doubtless very useful to anyone performing the operation on the cadaver, tends to make the book not a little tedious to read. In some cases the explanations are so superabundant that they seem to obscure rather than elucidate, as instanced by an unintelligible half page on a simple way in which to tie a reef knot.

Mr. Ernest Ward, who did the work of translation, deserves our thanks for giving us a medical textbook in good English instead of the combination of bad grammar and worse syntax in which most modern text books seem to delight.

We only regret that he did not lavish his gifts on something more modern and original than Professor Broca's uninspiring work.

An Index of Symptoms with Diagnostic Methods. By R. W. Leftwich, M.D. 6th edition. (Published by Messrs. Smith, Elder & Co., London.) Price 10s. 6d. net.

This is a book of 555 pages in which the author attempts to aid practitioners in arriving at a diagnosis. The subject is treated from the point of view of symptoms and signs. Thus, if the section headed Babinski's Reflex is consulted, a list is found of the various conditions in which this sign is present—in this case 17 different diseases. There is also a brief exposition of what is meant by Babinski's Reflex and how it should be elicited. Similarly, under the heading of "Knee-jerk lost or lessened" we find a list of some 60 different diseases. An attempt is made to indicate which of these conditions are the commonest by means of asterisks and other symbols.

The author's idea is apparently that when a case is seen with perhaps half a dozen different symptoms and signs, reference to the lists of diseases given under the various headings will narrow down the possible diagnosis or even limit it to one disease. We confess that we do not feel too sanguine as to the efficiency of such methods of diagnosis. In most cases which present any difficulty, the physician has to weigh the value of the various symptoms in arriving at a diagnosis, and we fear that often a prolonged study of the book might still leave the question of diagnosis undecided.

On the other hand, the book is undoubtedly valuable in reminding the physician of what a large number of conditions may give any particular sign or

symptom. It should also do something towards combating what the author terms the Fallacy of Obsession. Every practitioner, especially if he is not a man of wide experience, knows that his opinion on a case is likely to be biassed by a first impression of the patient or by something he has been told. He makes up his mind on some diagnosis and is apt to overlook some other interpretation of the condition which would be obvious to him were he reminded of the condition by seeing it tabulated in the book.

Medicine and surgery are not exact sciences, and, therefore, no system, however carefully thought out, can ever lead without possibility of error to a correct diagnosis. It is rather by the cultivation of the faculty of observation and by clinical experience than by study of such a work as this that good diagnosticians are made.

The Organs of Internal Secretion. By J. Geike Cobb. Pp. 238. (Messrs. Baillière, Tindall & Cox.) Price 5s.

This is an attempt to correlate our laboratory knowledge of the internal secretions with the results obtained by administering the glandular extracts therapeutically. Considering the enormous literature of both aspects of the subject and the controversy that exists between authorities, it is not to be expected that this volume will prove beyond all criticism. As the work is intended for the use of general practitioners much controversial matter has been withheld, and the therapeutic administration of glandular extracts alone and in combination with others has been considered from a purely practical point of view, and this with great skill and clearness.

The introduction to the book is far too optimistic, the reader being led to believe that neurasthenia in all its manifestations can be cured or improved by the judicious use of extracts derived from the endocrine glands, a view negatived in the closing chapters of the book where only two cases, neither beyond criticism, are quoted as having derived benefit from hormonal therapy.

The first gland considered is the thyroid, together with the parathyroids. The author has rather slavishly followed the standard works on the subject, and any reader with an acquaintance of Beidl or Swale Vincent must be struck by the lack of novelty in the style of the author. The recognition of a submyxœdematous state is insisted upon, and in the opinion of the present writer the evidence brought forward is both clear and convincing.

Each gland is now considered in turn, and has a chapter devoted to itself. Of actual facts, little of importance has been omitted, and the author here and there throws out some suggestions which certainly seem worth trying, without at any time allowing the reader's attention to drop by reasons of length. The author is largely in favour of administering pluriglandular extracts when those derived from a single gland are without success. Logically, this is, of course, a return to the medicine founded on empiricism, and although, as the author has it, "much has been accomplished by empiricism in the past," he seems to have overlooked the fact that it has left us much to undo.

Of special value are the chapters dealing with the endocrine glands of the alimentary canal. A perusal of these will furnish the house-surgeon or physician with many valuable suggestions. Colonic stasis is considered in reference to the thyroid. The author pleads that atrophy with previous hypertrophy negatives the view that this gland has much to do with the destruction of toxins from the colon, and that the relation may be thyroid first, colon second.

Again, exhibition of bile salts, together with neohormonal derived from spleen tissue seems worthy of trial in the same class of case, as the colon may respond to the same stimulus as the small intestine, and these bodies must, after all, be considered physiologically apart from our everyday purges.

These few illustrations are sufficient to show that although the book is in no way a standard volume (it makes no claim as such) and contains much that is debatable, it will stimulate the thoughtful reader to enlarge the scope in which he employs hormonal therapy, and for this reason alone its perusal is well worth his time.

Guy's Nurses and the War.

We are pleased to record the names of the following Guy's Nurses who have been mentioned in the list of the Secretary of State for War, for valuable services rendered in Home Hospitals in connection with the War.

Mrs. M. A. Clarke, *née* Crocker, Staff Nurse, Q.A.I.M.N.S.R., King George Hospital, Stamford Street, S.E. Guy's Hospital, February, 1903 to April, 1906.

Miss G. Cornell, Sister, Norfolk War Hospital, Thorpe, Norwich. Guy's Hospital, September, 1905 to September, 1908.

Miss A. E. Dean, Sister, Darrell Hospital, 58, Queen Anne Street, W. Guy's Hospital and Institution, July, 1912 to March, 1916.

Miss E. Fletcher, Sister, Graylingwell War Hospital, Chichester. Guy's Hospital, November, 1910 to January, 1914.

Miss M. L. Foord-Kelcey, Staff Nurse, Q.A.I.M.N.S.R., Victoria Hospital, Netley. Guy's Hospital, September, 1910 to January, 1914.

Miss E. Gooderham, Head Nurse, Mrs. Hall Walker's Hospital, Sussex Lodge, Regent's Park, W. Guy's Hospital and Institution, November, 1909 to 1915.

Miss J. Murray, Nurse, Mrs. Hall Walker's Hospital, Sussex Lodge, Regent's Park, W. Guy's Hospital and Institution, February, 1912 to March, 1916.

Miss M. O'Reilly, Sister, Norfolk War Hospital, Thorpe, Norwich. Guy's Hospital, May, 1905 to October, 1908.

Miss E. M. Studdert, Sister, B.R.C.S., King George Hospital, Stamford Street, S.E. Guy's Hospital, March, 1898 to February, 1910.

Miss H. Suart, R.R.C., Matron. Q.A.I.M.N.S., Cambridge Hospital, Aldershot. Guy's Hospital, July, 1895 to February, 1900.

Miss E. Whittam, Sister, T.F.N.S.. 4th Southern General Hospital, Plymouth. Guy's Hospital, February, 1907 to February, 1910.

Miss A. Willes, R.R.C., Acting Matron, Q.A.I.M.N,S., Connaught Hospital, Aldershot. Guy's Hospital, October, 1896 to November, 1901, and June, 1903 to April, 1904.

Miss E. M. Yates, Matron, Hospital for Officers, 27, Berkeley Square, W. Pro., Guy's Hospital, August, 1908 to September, 1911.

MATRON'S OFFICE,
GUY'S HOSPITAL, S.E.

Rugby Football.

GUY'S v. BART'S.

This was a very nice game, played on the Hospital Ground on Saturday, February 24th. We won, and by a margin of points which we certainly did not expect, and possibly this result may have been due to the fact that Llewellyn and one or two other prominent Bart's men could not turn up. But our men played remarkably and deserved to win.

Our first try came from Keet, and the second one, the result of good passing from Reitz, who swerved over like a three-quarter. Bekker led up to this score cleverly. The Bart's men were not getting the ball, so that Smuts and Krigr, two very smart centres with a strong hand-off, ot few chances, and when they had opportunities the passing was slow and hence attacking movements were hecked ere developed. Before half-time Keet showed fine pace, but no further score resulted, and as neither try was converted we crossed over with a 6 point lead.

Resuming, we indulged in some passing and making a good footing by Bart's goal. Curle judiciously punted wide to Coombs, who gathered and plumped himself over. Just after Cellier, playing very cleverly, passed wide to the winger, who again ran over. Both kicks were difficult, but Reitz goaled from the last named. The next item of interest was a good run by Smuts, being challenged, he passed; Coombs intercepted and got away, but couldn't swerve wide enough to avoid the Bart's back. The game swung to the other end, and there a crum five yards out ended in Bekker boring right through and grounding by the posts. Reitz's kick failed unaccountably, and the game ended. Guy's, 1 goal, 4 tries (17). Bart's, nil. Team :—

GUY'S.—P. G. McEvedy (back); E. C. Keet, C. L. Curle, G. M. K. Thomas, C. G. Coombs (three-quarters); W. Cellier, F. Bekker (halves); F. W. Reitz, C. W. W. Armstrong, N. B. Dreyer, G. R. Aspinwall, J. Van der Merwe, J. Joffe, S. T. Barrett, H. O. Long (forwards). Referee :—Dr. H. J. Brewer.

GUY'S v. ARTISTS' RIFLES.

With the ground in first rate condition at Honor Oak Park on Saturday, March 3rd, the game between these sides proved a very fast one, in which excitement was kept up to concert pitch right up to the last minute. Unfortunately we were not quite at full strength. Armstrong, Phillips and Gie were not among the forwards, and Millett was not at full-back.

The Artists' pinned us down at first and for some time our forwards were outplayed, but they always held their own in the tight, and with few exceptions at least prevented the Artists' getting the ball. On one occasion Tom Williams, a sturdy half-back, looked like going through, but was tackled, and with play pretty even, and all attacks stopped by brilliant collaring of both sides, no score had accrued up to half-time.

Resuming, our visitors following on a loose dribble, during which several men appeared to avoid falling on the ball and several visitors did their best not to get "on-side," two forwards scrambled over and Morgan secured the touch.

Guy's replied, Coombs nipping across after a follow up and just touching down, while two opponents collided on top of him. Reitz's kick was wide. Then came some smart passing, and I. Walters dashed over. From the stand it looked as though the final pass was yards forward. If so, fortune dealt us a hard blow, as Baines converted, and by the margin of conversion we lost; our only other score being an unconverted try by Reitz. Our men tried their utmost, especially Long, Bekker, Shellswell, Curle and Keet, but no further score ensued. Artists,' 1 goal, 1 try (8). Guy's, 2 tries (6). Team :—

GUY'S,—J. C. W. Curson (back); E. C. Keet, C. L. Curle, G. M. Thomas, G. C. Coombs (three-quarters): C. W. Cellier, F. Bekker (halves); F. W. Reitz, G. R. Aspinwall, N. B. Dreyer, J. Van der Merwe, J. Joffe, S. T. Barrett, H. O. Long, A.H. Shellswell (forwards).

Births.

ALLAN.—On March 15th, at "The Darland," Harrogate, to Mr. and Mrs. Douglas Allan, a son.

BENTLEY.—On March 3rd, at Northend, Ashford, Kent, the wife of R. J. Bentley, M.B., B.S., of a son.

GARDNER.—On March 2nd, at Albert Road, Whalley Range, Manchester, Muriel, wife of Lieutenant A. Linton Gardner, R.A.M.C., of Waters Meet, Ilfracombe, of a son.

Marriage.

FARNFIELD—WINDSOR-WATSON.—On Wednesday, March 7th, 1917, at All Souls', Hastings, by the Rev. H. Collinson, B.A., John Stewart Farnfield, M.R.C.S., L.R.C.P. London, to Annabel Windsor-Watson, widow of John Watson, solicitor, Liverpool.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

AS we expected, our remarks on the question of bread, meat, and sugar rations in a previous number of the GAZETTE has drawn upon us the indignation of a certain number of patriots. In our last issue we published a letter on the subject from Surgeon F. G. Lloyd, in which he strongly disagreed with our conclusions that the Food Controller intended the scale of rations laid down in his memorandum to represent not the maximum for an adult male, but the average for a family including children. In view of the criticisms directed against us, we decided to approach the fountain head of information on the subject at Grosvenor House, and we feel gratified at receiving a reply which bears out our former conclusions. The following is a quotation from Lord Devonport's letter received by us on March 30th :—

"With reference to the special points raised by you, Lord Devonport desires me to call attention to the paragraph in his statement indicating that the consumption of bread, meat, and sugar must necessarily vary according to age, sex, occupation, and other conditions, particularly as regards bread. The scale of amounts set out must be taken as the general average applying to households containing a normal distribution of adults and children of both sexes and various ages. It is recognised that some variation may be necessary, when other conditions apply."

"With reference to your query regarding the food statistics given in the Royal Society's Report, I am to say that Lord Devonport regards the statistics given on page 10 of the Royal Society's Report as giving a useful guide to the amounts which should be consumed per head in an establishment containing adults only."

In view of the above communication, we feel that Mr. Lloyd's fears of disaster to the national food supply as a result of our remarks need not be taken too seriously. We are glad to note that he approves of the exhortations to economy in the cooking and serving of food, and we trust that they will be borne in mind by those concerned.

THE Catering Department in the College is considerably handicapped in any attempts it may make to effect economies by the great variation in the number of men who feed in the dining-room from day to day. This is specially the case at dinner in the evenings. It is not uncommon to see as few dining as half a dozen besides the residents, while occasionally there are as many as thirty. If the caterers could have some idea beforehand of the number of men likely to be dining each night, there

would be a considerable economy in food, besides enabling them, perhaps, to reduce their charges slightly. This small economy could easily be effected by placing a list in the dining-room each morning from which residents in the College could cross off their names before mid-day if they did not intend dining in that night. Some such system has been found to work smoothly and satisfactorily in many institutions whose catering department is similarly situated to that of the College.

During the past month the Allies have made great strides on the Western front, but there is a tendency in the ultra-patriotic press to exaggerate the importance of the recent German retirement. It must not be hoped that it heralds in any way the end of the war. The organised and systematic nature of the retreat is well illustrated in a letter from a correspondent which we regret we cannot print in full. He writes as follows :—

"I will now tell you a little of the damage done by the Huns. Every church and bridge has been blown up, all factories destroyed and railways torn up, all houses burnt. Cellars and half-basements in many cases have survived, but were full of rubbish and confusion. All fruit and ornamental trees are cut down and avenues along roads in most cases. Summer houses, fish ponds, garden furniture, telegraph poles and any form of installation have been destroyed. The appearance of this town is worse than that of any shelled village (that has not been attacked over) that I have seen and is probably a worse sight than Messina or San Francisco after the earthquake. It is a sign that the war will go on until the Germans are either starved or somehow smashed, and argues, in my opinion, a prolongation of the war for two years. In addition to what I have mentioned, the Germans blew enormous craters at all cross roads. I entered this town, probably one of the first Englishmen, over a single plank across a weir, like an escaping hero in a melodrama. Until they are blown up, one rather forgets the blessings of bridges."

This brief quotation from one who is on the spot will do something to undeceive our minds of the pleasant fallacy that the Germans are in headlong flight. We fear that there is not much risk of the present generation of students in the wards failing to get an opportunity of seeing something of the war.

Mr. Bromley, as Dean of the Medical School, succeeded in obtaining six months' exemption for five medical students who were liable to be called up for service on reaching the age of 18. According to the War Office instructions which were in force until recently, medical students were not to be called up until the age of 19, and not then if they had passed an examination qualifying them to begin work in the wards. The new order if strictly enforced will practically cut off at the source the supply of medical men. Already the War Office is complaining of the difficulties in obtaining men for the R.A.M.C., and all reasonable men will agree with Mr. Bromley when he emphasised the importance of maintaining the supply of medical students. Even if the war ended to-morrow there will be a serious shortage in a few years, and if the War Office recruiting authorities are to be allowed to pursue their present short-sighted policy, it spells disaster for the health of the country in years to come. All other belligerent countries, both Allies and enemy, have realised the importance of allowing medical students to continue their studies except ourselves. We hope that other tribunals will follow the example of Southwark in guarding the nation against this danger.

Hand Ambulance for the District.

We have received the following subscriptions in response to the appeal for funds to present a hand ambulance to the Hospital for bringing in cases from the District:—

	£	s.	d.
Mrs. Molyneux...	5	0	0
Sister and District Nurses	1	10	0
Anon	5	0	0

It is estimated that the cost of the ambulance will be about £25. Subscriptions, large or small, should be sent to the Manager, Gazette Office, Guy's Hospital.

The Importance of the Ankle-Jerk.

We have received two pamphlets* on the subject of ankle-jerks by Dr. Hildred Carlill. The author has made an examination of the ankle-jerks of the crew of H.M.S. *New Zealand*, numbering 1,052 men. Total absence of one or both ankle-jerks was found in fifteen cases. Of these, three were cases of former infantile paralysis. Two men had evidence of sciatic neuritis. In one case a diagnosis of tabes was made and was confirmed by the results of a lumbar puncture. Three other cases were probably suffering from early tabes, but it was not possible to confirm the diagnosis by doing a lumbar puncture. In two men, with absence of the left ankle jerk, the cerebro-spinal fluid was normal and gave a negative Wassermann.

In the thirteen cases of absent ankle-jerk whose nervous system was thoroughly examined every one had some other abnormal condition such as absent knee-jerk, cremasteric, bulbo-cavernosus reflex, etc. In only one of the fifteen cases were there any symptoms which caused the men to complain of their condition.

In a paper on the Diagnostic Importance of the Ankle-jerk Dr. Carlill emphasises the importance of testing the ankle-jerks in all nervous cases. In tabes the ankle-jerks are frequently lost before the knee-jerks or the development of an Argyll-Robertson pupil.

Like the knee-jerk, the ankle-jerk depends on a direct excitation of the muscle, which is maintained in a state of tonus through reflex influences. It is present in all normal persons, though in some cases reinforcement is necessary.

The chief conditions which, by affecting the reflex arc, may cause abolition of the ankle-jerk are as follows :—

(*a*) Injuries and primary affections of the calf muscles, such as peroneal muscular atrophy or rupture of the tendo-Achillis.

(*b*) Affections of the peripheral nerves, involving the posterior tibial, the internal popliteal or the great sciatic. In alcoholic and diabetic neuritis the ankle-jerk may be lost, while the knee-jerk remains present.

(*c*) Lesions of the posterior roots, notably tabes. In 36 cases of this disease Dr. Hurst found the ankle-jerks absent in every case, while the knee-jerks were present in 8 cases.

(*d*) Lesions of the anterior horn cells, such as occur in acute anterior poliomyelitis, acute ascending paralysis, and progressive muscular atrophy.

All the above conditions are lesions affecting the reflex arc. The ankle-jerk may also be absent with lesions outside this arc. In complete transverse lesions of the cord it is abolished. In general paralysis there is some variation in the condition of the reflex. This is also the case with cases of cerebral tumour, meningitis, and disseminated sclerosis.

* The Ankle-jerks of a Ship's Company (reprinted from Journal of the Royal Naval Medical Service, January, 1917).

The Diagnostic Importance of the Ankle-jerk (reprinted from the same paper, April, 1916). By Temporary Surgeon Hildred B. Carlill, M.D., M.R.C.P., R.N.

Change of Address.

Surg. Prob. A. H. Shelswell, from H.M.S. *Achates* to H.M.S. *Mentor*, c/o G.P.O.

A. J. K. Drew, Royal Portsmouth Hospital, Portsmouth.

W. A. Dredge, L.D.S., from 10, Bryanston Street, Portman Sqnare, to 81, Wimpole Street, W.

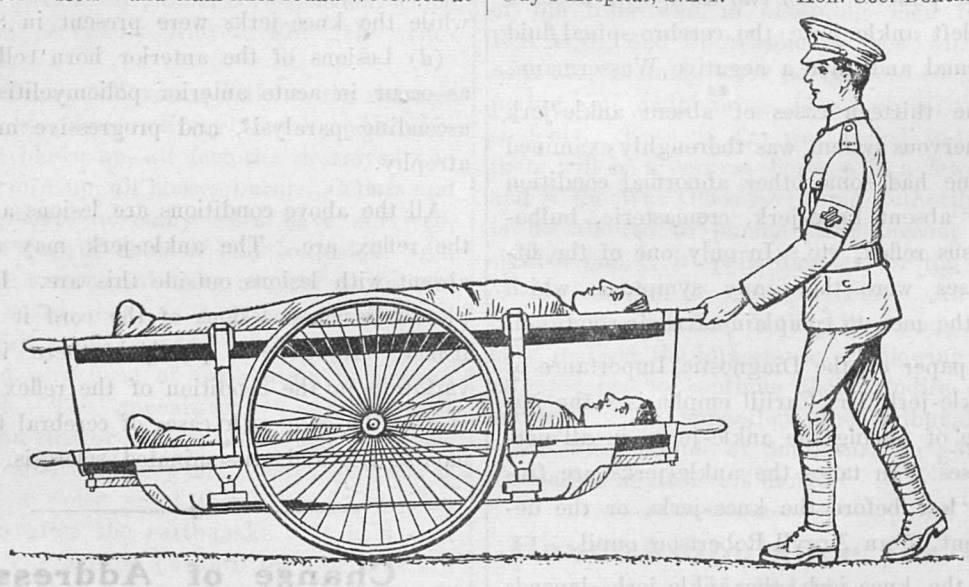
Lieut. C. H. Medlock, R.A.M.C., to "D" Battalion, 1st Brigade, Heavy Branch, M.G.C., B.E.F., France.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

[We would point out that we cannot *under any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—ED., G.H.G.]

SIR,—The remarks *re* two-wheeled stretchers in "Passim" of your last issue prompts me to send you a sketch of an ambulance machine devised by a friend of mine and myself early on in the war, and submitted to the military authorities. Some of these machines are now in use at the front. The special feature of the machine is its springing, which is designed to absorb all road shocks and vibrations. The first machine made was fitted with iron tyres, and was on one occasion towed over "setts" and tram lines round Woolwich at a speed of thirty miles per hour, and the "victims" in the machine declared the sensation was like flying, so few were the road shocks.



The machine is designed to hold two standard army stretchers without alteration, and the wheels can be raised and the machine dragged on its sledge-like base for passage over soft mud and loose sand, in which wheels would sink.—Yours truly,

Guy's Hospital, S.E. W. A. WOODWARD.
16th March, 1917.

The Dental Society.

DEAR SIR,—At a meeting of the above Society in the Hospital on the 2nd ult., a discussion from a previous meeting upon "A Possible Legislation of the Unqualified Man" was brought to a head.

The committee established to consider what schemes could be selected from those suggested have decided upon the following course:—That a letter should be sent to the leading journals and associations, stating that the House of this Society considers it impossible to proceed with any real solution of the problem until at least the position is better realised by the whole profession, and they therefore suggest to the authorities—

(1) That an authentic and embracing report upon incompetent practice be collected and set on record with the intention of giving to intending reformers, in whatever spheres they may be, a concise and trustworthy account of their difficulties.

(2) That a policy be laid down for the profession at large whereby each member may from time to time regulate his conduct in such wise as to be directly beneficial to the common cause.—Yours faithfully,

J. ESKDALE FISHBURN,
Guy's Hospital, S.E.1. Hon. Sec. Dental Society.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette," Guy's Hospital, London, S.E.*

Gun-Shot Wounds of the Knee Joint.

CLINICAL LECTURE BY C. H. FAGGE, F.R.C.S.

Gentlemen,—A correct appreciation of the principles governing the surgery of the knee demands some knowledge of the anatomy of the knee-joint and of the bacteriology of the infections it is prone to: it is also necessary to interpret accurately X-ray pictures. How much the surgery of gunshot wounds of the knee-joint depends upon anatomy one can readily realise, but how much it depends upon bacteriology is a thing about which we are more in the dark. In case I do not refer to it again, I would explain here what I mean. It is clear that one of the factors which determine treatment in gunshot injuries of the knee-joint is the degree of virulence of the infection. It is recognised that, while there may be usually a mixed infection, with all sorts of anaerobes, B. perfringens and even the tetanus bacillus, without producing clinical evidences of the diseases of which they are pathognomonic, the cases which do badly (if one can say that cases do badly on a bacteriological basis) are those infected with the streptococcus longus. Yet there are many other factors which determine the prognosis and the line of treatment, and, unfortunately, a bacteriological prognosis cannot be accurately relied upon, so the value of exact bacteriological reports for treatment and prognosis is as yet unknown.

To go back to anatomy for a moment, so important is this regarded to be, that Colonel Fullerton, of Belfast, reviewed the subject in the *Journal of Surgery*, July, 1916, in its relation to gunshot injuries. He there deals with the ordinary points of the anatomy of the knee, drawing attention to the fact that it is a composite articulation, and that the bursæ with which this joint so freely communicates form pockets in which infection lurks. And of these the most important is the quadriceps extensor bursa, passing up some distance above the patella. Those pockets which exist posterior to the articulation, the semi-membranosus bursa on the inner side and the synovial sheath around the popliteus tendon on the outer side, are not so important, in the sense that they are not so constantly infected. But if they are infected they cause much more troublesome abscesses behind the knee-joint. And then all those reduplications of the synovial membrane, the ligamentum mucosa and ligamentum alaria, and even more solid fibrous structures like the semilunar cartilages, while they aid the smooth, mechanical working of the knee-joint, by filling up the gaps between the bones, and may tend to localise infection, clearly hinder aspiration, irrigation and drainage. You know well that when a needle is put into a knee-joint it sometimes impinges against a synovial fringe, and as you try to draw the piston back, you suck into the needle some of this synovial fatty stuff.

Some years ago Barnard, of the London Hospital, was interested in the question of draining the knee-joint which, even then, was realised to be unsatisfactory in civil life. He worked out a method by which he thought it possible to drain the knee-joint with drainage tubes passed backwards so as to come out through the pouches of synovial membrane which bound posteriorly and contain the femoral condyles. That is to say, these tubes must come out into the popliteal space nearer the popliteal vessels than the hamstring tendons which pass down on either side. These tubes have to be passed through a longitudinal incision on either side of the ligamentum patellæ and the patella itself. If we have learned nothing else in this war, we have learned the fact that the be-all and end-all of drainage is

not the insertion of a drainage tube, and this fact is nowhere better exemplified than in the knee-joint. It is a common experience that if you put a drainage tube into the knee by Barnard's method, discharges do not run out from behind freely because the drainage tube is constricted about the middle of the joint. The reason of this appears to be that the condyles of the femur and the tuberosities of the tibia are close together, so that there is no gap in the vertical plane between the bones. Further, the postero-lateral and postero-medial aspects of the articulation are closely embraced by the lateral ligaments and the posterior part of the capsule: there would not be a stable knee-joint if it were not so. The osseous knee-joint is about as feeble a mechanical articulation as can be conceived, and its stability is entirely due to the fibrous structures passing from the femur to the tibia, whether they be attached to both at short distances from the articulation —as ligaments—or whether they pass freely over them as tendons. These ligaments are the very things which prevent the drainage of the knee-joint by tubes.

Gunshot wounds of the knee may be regarded as of three classes:—

(1) Those in which the missile, usually a bullet, passes through the synovial membrane of the joint without remaining there. These are particularly favourable if the case is treated soon after the wound is inflicted, so that the joint is not acutely infected. There are a number of wounded men who have wounds over their knee-joints and they constitute a very difficult problem to whoever has to deal with them initially. When we have to deal with such cases on this side, we do so at such a time that it is perfectly obvious that the knee is not infected. I have now under my care an officer who came over from France five days after receiving such a bullet wound: it was then clear that the bullet did not enter the knee-joint, because there was no evidence of injury to the joint itself such as effusion, pain or swelling. But it must be recognised that even if the synovial cavity is not penetrated there may be effusion from contusion of the tissues close to the synovial membrane. In these cases if there be effusion it is likely to be almost clear or slightly blood-stained, but never, as far as I have observed, markedly purulent. Such effusion can nearly always be treated successfully by one aspiration, which should be followed by absolute immobilisation of the joint. There is nothing more important in dealing with injuries of the knee than immediate, complete and continued immobilisation. I am sure one of the reasons why in the early months of the war injuries of the knee-joint fared so badly has been that this fact has not been sufficiently insisted upon by those responsible for doing so.

When a bullet—the cleanest form of missile —passes through the synovial cavity of the knee-joint and does not injure the bone nor remain in the joint, you have one very common type of case which will do well, apparently, whatever is done to it. If we think how near the three bones forming the knee-joint are together, it is extraordinary how often it happens that the bullet seems to have gone through the knee without any injury to bone; that it is more common than one would have thought is certain.

(2) The second class is exemplified by a case in which injury to the knee-joint has been caused by a bullet or portion of shell which remains in the joint, and within a few hours or days there is effusion which has become turgid.

(3) As the third degree, let me instance a shell wound of the joint, seen 24 or 48 hours after infliction, with injury to one of the condyles of the femur or of the head of the tibia, a portion of the shell remaining inside.

For the cases in which the soft parts over the knee are punctured by a missile, without evidence of involvement of the limb, it is necessary to do nothing except paint over the bullet wounds with iodine and immobilise the limb. If effusion occurs, aspirate the joint and send some of the fluid to the bacteriologist; and in such a case you can reasonably await his report before undertaking anything active. Some surgeons dealing with the same case would excise both the wound of entry and that of exit and, when possible, lay open the intervening track. Working on these lines, the school of Rouen pack the resulting gap with sterile gauze in the centre of which are placed numerous tablets of ordinary salt, the so-called "salt gauze pack." Between the type in which there is no injury to bone and no lodged foreign body, and that type in which there is severe bone injury and lodgment of foreign body, occur the majority of the cases which are difficult.

Let us, for a moment, speak of the worst ones. Early in 1915 the consulting surgeons in France asked the Director-General to find out whether a large number of cases were being returned to England of injuries to the femur and the humerus which required amputation. The reason they did so was that at that time they were of opinion that if an injury to the knee-joint was associated with fracture of the lower end of the femur, immediate amputation was the best thing to do. If you read that "Manual of Treatment" which the War Office issued early last year as a guide for Regimental Medical Officers, you will find the statement made that primary amputation through the thigh should be carried out when a comminuted fracture of the articular ends of the bones forming the articulation is present. I think surgeons in France have departed from this reasoning in a conservative direction to a very large extent. Now, such extremely bad cases where there is extensive and wide-spreading fracture of the lower end of the femur or the upper end of the tibia are comparatively few. There may be associated injury of the popliteal vessels or to the popliteal nerves. If the femur or tibia is injured for a distance from its articulating surface of more than two or three inches at the outside, then primary amputation will usually be desirable, because any conservative measures would leave too much shortening to allow of the patient obtaining a reasonably useful limb.

Having broadly dealt with the slight and the most severe types, we can devote the rest of our time to the consideration of the intermediate, moderately severe cases. It is a very difficult problem to know what is the right course with anyone of these individually, for though one may be disposed to regard any case as mild, they are very variable in many characteristics of their course and ultimate result.

The first factor which influences their severity is the cause of the wound. From what I have already said you will have gathered that a rifle bullet passing through the knee-joint often does not cause any grave injury to the articulation, and it does not seem prone to carry with it a very constant or virulent infection. Those gunshot wounds of the knee which I have seen and which have been aseptic—using that term in the clinical rather than the bacteriological sense, namely, that there is no evidence of infection—have been due to bullets. Now, if you may deal conservatively with a bullet wound of the knee, you will not after a little experience be so inclined when you have a shell wound of the knee to deal with. There has been a good deal of hesitation in laying down strict lines for the correct treatment of lodged foreign bodies. Some have said that foreign bodies should only be removed when they are definitely interfering with the articular sur-

faces. I think this is absolutely and entirely wrong, for everything has convinced me that if there is a foreign body which has lodged in, or which is in any relation to, an articulation, the sooner it is removed the better. I am positive it is entirely bad surgery to leave a foreign body anywhere near a joint. My experience may be a little useful in this respect, because I have seen several of these knee cases which have been well enough to come from France within three or four days to a week, and which have been comparatively mild, and yet within another week or ten days they have become most virulent. And I think one reason for the occurrence of such a delayed or latent type of infection of the joint is that a foreign body has been left in the vicinity of the articulation; this foreign body is infected and sooner or later this becomes active and spreads to the bone and articulation.

In a few minutes I shall tell you of a recent case in which a lodged shell fragment was left and set up a re-infection.

I have referred to the importance of immobilisation and to the fact that you can place some reliance upon the organism producing the infection in any particular case; the most important factor which determines your treatment, however, is the patient's general condition. If a man with a wound of the knee, even if it is only mildly infected and there is no gross bone injury, is sleeping badly, has starting pains at night, and is not taking his food well, and is becoming emaciated and pale, you have to be drastic, particularly, of course, if some time has elapsed between the infliction of the wound and his coming under treatment. Time is the last factor to which I shall refer. There is no doubt that if active surgical treatment is instituted within 48 hours the majority of the cases do well. It is the cases who lie out for a long time and do not get efficient active treatment in the first 24—48 hours who do badly, without direct regard to the severity of their injury.

For the milder type of case in this intermediate class, the early treatment consists of giving an anæsthetic, cleaning the whole area of skin around the knee, and excising the wounds of entry and exit. If the joint is actually entered, the affected synovial membrane is excised, any foreign body and all detached fragments of bone are removed, the joint is irrigated with 5 per cent. saline solution, and the synovial membrane is closed. In some cases it is wise to introduce a drainage tube down to, but not inside, the joint, and if it has been absolutely impossible to excise the wounds of entry and exit because of their relation to important structures, you can pack the wounds of entry and exit with gauze wrung out with eusol, or gauze into which have been placed the salt tablets I have already mentioned. In this type of case it is often found that after a day or two the effusion recurs into the knee. Then a needle is introduced into the knee-joint, a little way from the old wound, and the fluid is aspirated, following which a few drachms of ether or 2 drachms of a 2 per cent. solution of formalin in glycerine is injected into the joint. The joint is then left alone again, in an immobilised state, and if necessary this aspiration and injection are repeated.

This conservative line of treatment was introduced by Colonel Gray at Rouen a year or more ago, and was largely based on the theory of Wright's hypertonic saline solution treatment.

But if the case does not do well with such treatment, what shall we do then? According to our pre-war ideas, what we would do is make two incisions, one on each side of the patella, and put a drainage tube right across; and we would either irrigate that constantly or syringe it out two or three times a day with eusol, or peroxide of hydrogen, or some other

antiseptic. And I have not any doubt that, in the mild type of case, particularly where the anterior part of the articulation alone is involved, what is called the femoro-patellar articulation, a good result ensues from simply doing this. While synovial fringes have disadvantages, they also have advantages, in that they tend to limit infection. I have seen three or four cases of knee-joints which have become active a fortnight after the infliction of the wound, and in which it has been necessary to do no more than insert one drainage tube just inside the joint. But there are a much larger number in which, either because the initial bone injury was so extensive or because a conservative line of treatment has failed, one has to do something more.

If your drainage by this means fails, what will you do? If one could not insert a drainage tube across the articulation, the pre-war surgeon would amputate. As an alternative to a secondary amputation, two milder means have been introduced, and I can give you an idea of them in two words: one is erasion, the other is excision. By erasion of the knee one means opening the articulation and removing all soft tissues inside the capsule, the removal by scissors of all synovial and sub-synovial fat, of ligaments, that is to say, the ligamentum mucosum and the ligamenta alaria, the semilunar cartilages, and even the crucial ligaments, so as to leave the femoral condyles and the top of the tibia bare. And in following out this treatment for a mild type of case which has gone wrong, it is usual to leave the large flap—which has been turned upwards to expose the interior of the joint—unsutured, and to pack the interior of the joint, and as it is easiest to drain such a joint in the slightly flexed position, it is put up in a bent Thomas', Mackintyre, or other splint for three days, the bend being at an angle of 135 degrees. If after three days the infection has subsided, it is usual to suture the long flap into position, and to expect to get a partially mobile knee.

We have still remaining the cases in which the initial injury to the articular surfaces is so bad, or which, in spite of Gray's preliminary conservative treatment, are going to the bad. It is for these that Fullerton advocates excision of the knee.

Only to-day I was trying to deal with such a case, a Russian who has been in Hampstead Military Hospital for some six weeks. He is in a Canadian regiment, and came over with a shell wound of the external condyle of his femur. A large piece of shell was lodged in the external condyle, which is much comminuted. However, there was on admission no active trouble going on; his knee was immobilised, rather imperfectly, on a splint, and the man did not seem ill. A few days after he came in his temperature went up and the joint became more swollen. Then it was thought advisable to open it up and insert drainage tubes, at the same time removing a large piece of shell which had been localised by X-rays, and to remove a good deal of the external condyle of his femur. And so he went on for some weeks, with an occasional rise of temperature. Ten days ago it took a distinct turn for the worse, and for no reason that was obvious, because immobilisation has been much more adequately secured on the Mackintyre splint. On opening up the knee-joint again it is found that there was a good deal of destruction by a slow septic osteitis of the external condyle of the femur. The external evidence of this was that he was gradually developing a genu valgum; the condyle was being destroyed and in consequence was giving way.

This morning's effort was directed to dealing with his condition more radically. A long, inverted horseshoe incision was made, as is usual for excision of the knee, but rather further back on either side, coming down over the ligamen-

tum patellæ in the mid line; this was cut through and the patella was turned up; all the synovial tissues were excised and the articular surfaces of the femur, tibia and patella were removed.

A few days later as the local condition was no better and the patient's general condition continued to get worse, the M.O. in charge amputated through the thigh. The patient has now left hospital, having made a rapid improvement in general health after his septic limb was removed.

This method has been advocated by several surgeons in just the sort of case which I had this morning, because it is an alternative to amputation.

While removal of the patella helps to render free drainage of the subcrureus pouch more easy, I cannot help thinking that its removal diminishes the power of extension of the thigh and renders the ankylosed knee less stable. I have seen several cases in which this defect has impressed me, and particularly note it here as several men in France asked me about this point.

It is debateable, I think, whether excision has a large field for such septic joints, though, of course, it has much to recommend it if it succeeds, for it preserves for the patient his own leg, as opposed to an artificial limb—a very strong argument. I would not have done it to my patient to-day, and I have not done it before to any patient in a similar condition, unless I felt he would be in such a condition in a week that if excision failed he could then stand amputation. If there is any doubt in one's mind as to the patient being able to stand amputation within a week, I think one has no right to do an excision, because excision is not an alternative to amputation when the question of saving the patient's life enters in. Of course, you have to bear in mind the fact that a leg is not worth as much as an arm, and an excision under the best conditions has considerable disadvantages in regard to locomotion afterwards.

Take the worst point of view. We have, in Hampstead, a man who had his knee excised in France. He has got no patella; he has got good ankylosis of femur and tibia, with four inches of shortening. His knee is straight, but a sinus exists in the scar, and X-rays show a small area of dead bone, and on the outer side of the knee is a bit of wire, the means used for keeping the femur and tibia in contact. I suspect there is some connection between that wire and dead bone, and that both will have to come out before it heals. If a man has to lose as much femur as four inches, he is much better without his leg.

I would sharply limit excision to those cases in which the damage to the articular ends of the bone was two inches or less. And it is clearly inapplicable in those cases in which, as it went in or out, the missile formed a track along the muscles of the popliteal space or of the thigh, which track later became infected. Again amputation is a safer and wiser alternative if, with associated damage to the femur and infection of the knee-joint, there is an injury to the external popliteal or peroneal nerve, because a patient with a stiff knee does not want also a dropped foot. If the result is going to be a stiff knee and dropped foot, the man is better without his leg altogether.

Colonel Fullerton recorded 64 cases of this operation of excision in a recent article in the *British Medical Journal*. He usually removed about two inches of the femur and the upper surface of the tibia and then put the leg up in a Thomas' knee splint; extension was applied, so as to separate as far as possible the two raw surfaces from which the intervening portion of bone has been removed, in order to drain the resulting septic cavity. After ten

days, or such time as the infection requires to subside, he allows them to come together until the bones ankylose.

I cannot help thinking there must be a comparatively limited class of case for which excision of the knee—drainage and conservative treatment having failed—is a possible alternative to amputation. Of Fullerton's 64 cases, he did 22 in the first two days, and they did well, there were no deaths and no amputations. He did 42 after three days, and of those, 13 required amputation, and 6 died. So of the 42 in which excision was done after three days, he only succeeded in saving the limb in two out of every three, *i.e.*, every third case had to have the limb off.

One of the disadvantages which those who advocate excision must bear in mind is, that it is very difficult to maintain correct alignment of the bones afterwards. The most common defect is that the knee bends, but an error in the lateral plane is not uncommon. And these knees, in order to get good bony ankylosis, have got to be kept absolutely rigid for at least six months, even in the case of adults.

Since this lecture was written and delivered I have had the interesting opportunity of seeing something of these cases in their early stages. I am convinced that for these cases, as for so many other war injuries, such as those of the chest or abdomen, everything depends upon the thoroughness and efficiency of the treatment the wounded man receives in the C.C.S. Now that a mobile X-ray apparatus is usually available, thorough knee-joint operations are possible and no foreign bodies need be or are being left. The treatment I saw being carried out is much what I have outlined, and I had the chance of watching several for long enough after the shell fragments had been removed, the wounds excised and the joints aspirated, to convince myself that they were almost certainly free from any risk of a severe infection.

I had the privilege of attending a surgical meeting of the —— Army, before which Capt. Lockwood read a most interesting and practical paper on this subject. He advocated what I have called Gray's method, and laid particular stress on suturing the synovial membrane and capsule. He did not make much reference to excision, so that I conclude it was not their practice to make use of it as a primary procedure, for which alone, as Fullerton's statistics show, it appears to have any definite value.

Col. Gray, who followed with another short paper, seemed to attach no value to suture of the synovial cavity after washing out the joint, in fact, he appeared to prefer to leave it open for leakage. There can be little doubt that if this line of early treatment succeeds there will be fewer of the most troublesome cases to which I have chiefly directed your attention and which did not appear to loom largely in the horizon of those at the front.

Those interested in the subject should not fail to see in the *Lancet* the Hunterian Lecture by Capt. Frank Cook, formerly of Guy's.

The Landon Tea.

CHRISTMAS, 1916.

Our readers will be glad to see from the balance sheet the present satisfactory financial position. The cash at the bank—£268 0s. 2d.—will be invested in War Loan and held for the benefit of future Landon Teas.

Owing to the war and the diminished number of students and nurses on the private staff who used to collect, the 1915 expenses were met with great difficulty, so it was decided last autumn to issue a special leaflet of appeal, and Sir Cooper Perry kindly offered to defray the expenses of postage. A copy of the appeal was also enclosed in each Gazette of that date. Very generous contributions came from some of

the Governors of the Hospital, and a good response was made by the nurses and their friends.

The notice in the Gazette reached old Guy's men everywhere, and many replied, with their donations, that of all Guy's Christmas institutions the Landon Tea must never fail, and that it was to them a very special and delightful memory.

Messrs. Cox and army field post offices were largely drawn upon by those in the R.A.M.C. for the cause, one and all wishing they could be present to hear the never-to-be-forgotten shout which welcomes the "Niggers."

As usual, Mrs. Landon, senior, and Mrs. T. W. Landon took active interest in the tea, Mrs. Landon writing if only it had been possible she would have attended, and sending some holly to decorate her son's portrait which hangs in the out-patients' hall on Christmas Day. The Treat passed off most successfully and the catering was again undertaken by the Hospital, and is a great improvement upon any previous arrangement.

Now that "Pictures" are out of the question and moreover can be seen in the Boro' for "an 'alfpenny," a platform is erected in the middle of the hall, and after their tea the children enjoyed for nearly an hour what was aptly described as "continuous talent."

The "Niggers" made the round of the hall and mounting the platform, generally entertained and led the children in the latest songs. There they are the objects of noisy and rapturous attention, and favourite characters are eagerly picked out.

Enquiries as to a missing Charlie Chaplin and a "monkey" of other years and a general familiarity with the doings of "Niggers" did not give the impression that, *vide* the rules, none of the children had been before! "I don't fink." Trust a Boro' child to find a way.

The Wardmaids' Troupe came next and they too delighted their audience with songs and dances. The maids are greatly to be commended for their help, for they make their own costumes and work hard to ensure their performance being a success.

The Christmas trees and present-giving were the final item on the programme. All who contributed funds or personal assistance can rest assured that on Christmas afternoon in Out-Patients the world of war was indeed shut out and a world of love, albeit a noisy one, shut in.

Will subscribers and helpers please accept the grateful thanks of the Landon Tea Fund Committee?

F. A. SHELDON,
Treasurer.

LANDON TEA FUND.

Statement of Income and Expenditure, Christmas, 1916.

Income.	£	s.	d.
To Donations and Collections, etc., from October, 1916, to March, 1917	324	6	8
	£324	6	8

Expenditure.	£	s.	d.
By Cost of Tea (Hospital account)	11	5	7
„ Groceries, Provisions, Fruit, etc. ...	13	4	1
„ Toys	17	4	10
„ Printing, Stationery, Postage of Cards	6	9	6
„ Police Fee, Gratuities, etc.	8	2	6
	56	6	6
„ Balance carried forward—Cash at Bank	268	0	2
	£324	6	8

Audited and found correct,
W. J. CURRY,
March 22nd, 1917. Corporate Accountant.

Papers by Guy's Men.

W. Norwood East, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond.: A case of Psychasthenia with Criminal Impulses.—*Lancet*, March 31, 1917.

Report of the Architect and Surveyor for the Year 1916.

To the Chairman of the House Committee, Guy's Hospital.

Sir,—I have the honour to furnish the House Committe with a Report reviewing the history of my work for the past twelve months :—

Henriette Raphael Nurses' Home.—An extension to the Nurses' Dining Hall providing accommodation of 52 additional seats has been completed. This extension occupies a portion of the large court between the Nurses' Home and the Laundry. The work has included the removal of the northern flank wall of the dining hall and a constructional support of the superstructure of four floors by means of large compound steel girders and stanchions. The total expenditure amounts to £1,396 11s. 4d., including the provision of a large basement store adjacent to the Nurses' Box Room.

New Clinical Laboratories.—The three New Clinical Laboratories leading off the staircase at Hunt's House for the use of Physicians and Assistant Physicians have been completed. The structural work was executed during the year 1915 and the fittings and finishings have now been provided. The total expended amounts to £1,187 17s. 1d.

New Electrical Department.—Alterations have been carried out to the northern half of the top floor of Hunt's House, and the space completely fitted up for the new Electrical Department, with Dressing Rooms, Treatment Cubicles, Hot Air Bathroom, Consulting Room for the Medical Officer, and a large Class Room for Students. All the special appliances and baths have been made in the Works Department.

Hospital Repairs and Renovations.—The expenditure during the year upon works of renovation and general repair shows an increase over the previous year, due to some extent to increase in wages and cost of material, although I have to report that extra works of reparation and painting this year became due and were done for preservation of the buildings, and in particular at the Nurses' Home, the Laundry, the Theatres and Corridors in Guy's House, the Colonnade, the exterior of the Dental Department, and the external ironwork generally of the hospital buildings. including the balconies and escape staircases.

Colonnade.—Improvements and works of reparation have been carried out at the Main Entrance to the Hospital. The steps and the slope at the southern end of the Colonnade have been reconstructed to afford an easy access, and the Arcade on both sides of the Colonnade has been completed in Portland stone and glazed oak screens, by alterations to the Porter's Lodge and the adjoining staircase leading to the wards.

Chimney Tower.—An examination of the large chimney tower of Hunt's House revealed the necessity for immediate repair; the stone balustrade found to be decayed has been removed, and replaced in reinforced concrete of similar design. The iron pinnacle has been thoroughly overhauled, repaired, and painted, and the brick walls of the tower have been re-pointed. This tower, measuring 18 feet square, is, I believe, one of the highest landmarks in the south of London. The total height from the ground to the top of the pinnacle is 211 feet.

In the month of May the House Committee had under consideration the protection of the specimens in the Museum against damage by aircraft, and I was then instructed to arrange for the wax models to be removed to the basement of the Medical School, which removal the Works Department duly carried out under the supervision of the Curator. At the same time the alcohol used for the preservation of specimens was replaced by formalin.

Many surgical appliances and hospital furnishings are made or repaired in the Works Department. The following are some of the items for the year 1916:—

992 Crutches.
850 Surgical instruments re-plated.
151 Mattresses.
175 Pillows.
134 Ward-bed curtains.
20 Couches and Settees re-upholstered.
35 Easy and wheel chairs.
23 Wedge pillows.
130 New window blinds.

Insurances.—The Hospital Fire Insurances have been renewed for the same total as the previous year, viz., £325,550, at premiums amounting to £309 6s. 6d., and Aircraft Insurances have again been effected at a total of £318 150, the annual premium amounting to £453 19s. 7d.

Works Department.—The annual expenditure accounts under the Works Department for the last ten years are given as follows :—

	£	s.	d.
Year 1907	20,560	17	2
„ 1908	25,000	12	7
„ 1909	25,731	15	10
„ 1910	21,239	0	8
„ 1911	24,440	16	0
„ 1912	25,389	6	1
„ 1913	21,569	2	2
„ 1914	23,406	8	5
„ 1915	19,772	9	3
„ 1916	17,175	8	2

The workshops for the many trades of the Department have been well maintained, and the central store for materials fitted in 1915 has proved very beneficial. After allowing for depreciation, the stock has been scheduled at a total of £1,979 11s. 11d.

Thirty-seven workmen from the Works Department have enlisted in His Majesty's Forces; three have returned after discharge; and two discharged from the army (time completed) have been recalled to the colours.

The weekly grant by the Governors to dependents of married men serving with the Forces, and the war allowance to all the Department employees amount for the year 1916 to a total of £1,335 8s. 7d. (Dependents, £842 6s. 3d.; War Allowances, £493 2s. 4d.)

During the year notices have from time to time been received from various Trades Unions resulting at the present date in an increase of £15 per week for wages.

The site plan of the Hospital showing the general lines of drainage has been revised up to the end of 1916, and hung in the Governors' Committee Room.

The College and Medical School.—The buildings have been maintained in good structural repair, but decorative repairs to the School Buildings in particular are necessary.

Southwark Estate and Properties of the Re-Endowment Fund.—The gross annual rentals of these properties has been maintained, and with the exception of two small lock-up shops all the properties are now let.

A dilapidated cottage in Great Maze Pond has been demolished, and at an expenditure of £203 an annexe to the adjoining warehouse has been built on the site, and let to produce an annual rental of £15.

The repairing covenants under certain leases granted by the Hospital have not, I find, in all cases been complied with, and it has been decided to call the lessees' attention thereto, a measure which will, I hope, ensure a satisfactory result during the next year.

Insurances effected by the Hospital upon the properties of the Southwark Estate and of the Re-Endowment Fund are as follows:—

Fire Insurances, £98,610; annual premium, £153 12s. 5d.

Aircraft Insurances, £104,310; annual premium, £135 16s. 7d.

A sum of £24 16s. 6d. has been recovered from certain tenants towards the total Aircraft Insurance Premiums.

In the month of March last I visited with the Renter, the properties at Cardiff known as Nos. 103 and 106, Bute Street, and also a small weekly property at Newport, and reported to the House Committee upon a proposed sale of the Leasehold Interests. Subsequent negotiations resulted in a purchaser increasing his offer by nearly £600, the Hospital finally disposing of the property for £4,850.

Cadoxton Court Estate, Barry Docks, South Wales.—Upon the instructions of the Governors in March last I visited and reported upon an estate near Barry Docks, South Wales, offered to the Hospital for the Medical School by Dr. Milward, subject to a mortgage loan and to certain charges, and also to the Hospital granting a life annuity to himself and Mrs. Milward. The Governors decided to proceed with the matter subject to Dr. Milward obtaining a proper release of the estate from the charges created under his two marriage settlements, viz., £3,000 and £4,000 respectively.

Estate of George William Rhodes deceased.—In June last I surveyed and reported upon some 34 acres of freehold land at Shorne, near Gravesend, and in subsequent negotiations, approved by the Governors, arranged for its sale for £920 by the Trustees of the Estate.

I am, Sir,

Leadenhall Bldngs, Yours faithfully,
E.C. (Signed) WILLIAM J. WALFORD.
January 19th, 1917.

Notice.

Guy's Hospital War Savings Association.

Operating Scheme No. 2a. Minimum Subscription, 6d.
Registered No. 297/27.

The Committee invite applications for membership of the above Association from all persons in any way connected with the Hospital, or their friends, who, by their savings and contributions, are desirous of assisting as far as they can, the National Cause.

The investment is one which can be recommended (maximum return over 6 per cent.), and it is hoped the Association's present membership of about **370** may yet be largely increased, so that the response from "Guy's" to the Government's appeal for more financial help may be a generous one.

Number of certificates purchased by the Association to March 31st, 1917, at 15s. 6d. each **899**

Hon. Secretary:
Miss E. HUGGETT,
Superintendent's Office,
Guy's Hospital, S.E.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

An Index of Differential Diagnosis of Main Symptoms. Edited by Herbert French, M.D., F.R.C.P. 2nd Edition published by John Wright & Sons, Bristol. Price 42s. net.

This is a new and considerably enlarged edition of the already well-known Index of Differential Diagnosis published in 1912. The general plan of the book remains unchanged, but the articles have been rewritten and the illustrations have been nearly doubled in number, including about 20 additional coloured plates. The size of the type employed is larger than in the first edition. The advantage of this in our opinion far outweighs the increased size and weight of the volume.

There are twenty-two contributors besides the Editor. Among these are no less than eight members of the Guy's Staff. Dr. Hale White has written two long and important articles, one on Affections of the Joints and the other on Enlargements of the Liver, besides a number of shorter contributions. Dr. Hurst has written 12 pages on Constipation, including Acute Intestinal Obstruction. He includes a number of skiagrams of bismuth meals in the various types of constipation. The articles on ear symptoms are by Mr. Philip Turner, while Mr. Rowlands has written on Spinal Curvature, Clubfoot, and Inguinal Swellings. The articles dealing with Ophthalmology are by Mr. Eason.

Some 50 pages on Neurology are contributed by Dr. E. Farquhar Buzzard, while Sir Malcolm Morris has written the sections on Skin Diseases. Gynæcological symptoms are dealt with Mr. T. G. Stevens, and Genito-Urinary symptoms by Mr. R. H. Jocelyn Swan.

It is not of course possible in the compass of a review to attempt to deal with individual articles, but the fact that all subjects have been dealt with by those who are recognised authorities on that subject is a strong recommendation and a guarantee of the thoroughness with which the book has been compiled.

As its title implies the book deals with disease from the point of view of symptoms and signs. The articles are not on particular diseases, but on one symptom or sign. The index of nearly 150 pages gathers together the symptoms under the heading of the various diseases in which they occur.

But the book is more than a means of diagnosing a particular case by looking up the prominent symptoms. Many of the longer articles such as those on jaundice, joint affections, or paraplegia, are useful guides to the methodical method in which a case should be approached and investigated. The book is no short cut to diagnosis, and those who have written it would be the last to claim that with its aid no previous clinical experience is necessary. It is, however, a most excellent book of reference, and one which will enable the student or practitioner to estimate the significance and value of symptoms.

In conclusion, we can thoroughly recommend it as a useful addition to the library of every medical man, and we feel sure that the present edition will rival in its popularity the first edition.

Appointments.

R.A.M.C.

Temporary Lieutenants to be temporary Captains :—E. Ashby, A. Densham.

To be temporary Lieutenants :—C. H. Medlock, I. R. R. Brogden.

Officers relinquishing their Commissions :—J. F. Young, F. D. Crew.

R.A.M.C. (Territorial).

Capt. (Temp. Major) F. Ward relinquishes his temporary rank on alteration in posting.

Lieut. C. Jephcott to be Captain.

Civil.

J. E. L. Bates, M.R.C.S., L.R.C.P., has been appointed District Medical Officer of the Croydon Union.

Charles Edwards, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for Bridport.

A. H. B. Kirkman, F.R.C.S. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator for the Branscombe District by the Honiton (Devon) Board of Guardians, and Medical Officer and Public Vaccinator for the Axminster (Devon) District of Axminster Union.

Rugby Football.

UNITED HOSPITALS v. PUBLIC SCHOOLS SERVICE XV.

The Hospitals had a "pipe opener" at Richmond with the above opponents, both for the purpose of a good game and to settle a side to play against the A.S.C.

on Saturday, March 17th. This match was played on March 10th. The students won by 3 goals and 1 try to nil, but the form was not quite good enough, and the team must do better if it is going to run the Army Service team at all close. Bekker, the Guy's half, was playing for the Schools, and his energy and general play should make his selection a matter of consideration if not of certainty. Lieut. Millar, of South African fame, and Lieut. Bull, the International, were very useful in the opposite pack, but the other members of the team were so totally strange to each other that they did not provide any very great opposition. For this reason we should have done better.

Curle gained a fine try to commence with, striding away from half-way in fine style, Atkinson goaling. Krige, of Bart.'s, then came along with a clever try, and Atkinson proving successful with the kick, the Hospitals were now 10 points to the good. Soon after a forward rush by the Schools was only ended by Smith conceding a minor. Just before half-time Humphries scored a try, which Atkinson failed to convert, and ends were changed at this stage.

Krige got his forehead cut on resuming, but he soon returned with his wound bandaged, and soon had a hand in the attacks, but the forwards claimed the next score. Joyce, Moseley and Reitz had a hand in the movement, and Reitz eventually scored. Atkinson's shot hit the cross-bar and then bounded over. The Schools finished more strongly, but no points were put on for them, the final score reading: United Hospitals, 3 goals, 1 try, 18 points. Public Schools, nil. Team:—

P. A. Smuts (Bart.'s), R. M. Humphries (Thomas), E. C. Llewellyn (Bart.'s), C. F. Krige (Bart.'s), C. L. Curle (Guy's), S. R. Cowie (Middlesex), J. A. Bishop (Thomas), J. C. Joyce (Bart.'s), A. H. Shellswell (Guy's), F. Moseley (London), M. P. Atkinson, A. T. Ware (Thomas), J. W. Reitz (Guy's), H. M. Edwards (Thomas), C. W. W. Armstrong (Guy's).

UNITED HOSPITALS v. A.S.C., GROVE PARK.

The Hospitals did not manage to win this game at Richmond on Saturday, March 17th, or even to make a draw of it. They, however, did the next best thing—made the margin against them as low as any team against which the victorious soldiers have played. W. A. Stewart, the Scottish International, was not available for the students, and H. Millett was also absent, while from the A.S.C. Captain Nixon was away; 1 dropped goal and 4 tries was the total of our opponents' score—16 points to the Hospitals' nil. Luckily Gronow, who as a rule is a dead kick at goal, was not at his best; this fact served somewhat to keep the score within reasonable bounds.

It was a delightful afternoon, and about 3,000 people watched the game. The soldiers at once commenced to attack, and were only kept out by very strenuous tackling. Reitz was soon brought from the scrum to assist in breaking up the combination of the backs and keep an extra watchful eye on Holbrook, which he did very thoroughly, bringing that clever three-quarter down at least half-a-dozen times. Once the Hospitals got going through a forward rush and Humphries was away twice, but Wagstaff accounted for him, and the only score that accrued during the first half was a try to the A.S.C., gained by Clark.

Corsi scored soon after recommencing, and Holbrook, who was repeatedly fed, was splendidly tackled by Reitz. Humphries got off well again, but in trying to punt over the full-back's head the ball hit John and bounced out of the way. The game was now nicely opened up by the winners' threes, and Rosenfeld dropped a perfect goal from a long distance away. Bishop had hard luck in not scoring, just going into touch a short distance from home. Rosenfeld then charged down Smuts' kick and scored, and before the end Cockeel ran in. As Gronow failed to convert any of the tries, the score ended as above. Team:—

P. A. Smuts (Bart.'s), R. M. Humphries (Thomas), I. F. Powell (London), C. F. Krige (Bart.'s), C. L. Curle (Guy's), S. R. Cowie (Middlesex), P. F. Bishop, J. J. C. Joyce (Bart.'s), F. M. Moseley, M. P. Atkinson (London), S. A. T. Ware, H. M. Edwards (Thomas), F. W. Reitz, C. W. W. Armstrong (Guy's), J. Nicholl (Middx.).

Birth.

RYLE.—On March 21st, at 15, Madeira Place, Brighton, to Capt. John Ryle and Miriam Ryle, a son.

Marriages.

COOKE—DOUGLAS.—On January 18th, at Trinity Church, Kelso, N.B., by the Rev. T. C. Kirkwood, assisted by the Rev. J. F. Cooke (brother of the bridegroom), Oswald Hayward Cooke, M.C., 2nd Lieut., K.C.Y.L.I., second son of J. H. Cooke, Esq., Winsford, Cheshire, to Margaret, only daughter of G. W. Douglas, Esq., of Appleford, Berks.

MAYBURY—JAMES.—On March 19th, at Christ Church, Woburn Square, W.C., Capt. A. V. Maybury, R.A.M.C. (T.F.), to Agnes Maud, second daughter of Mr. and Mrs. J. James, of West Haddon Lodge, Rugby.

Death.

OMMANNEY.—On Friday, March 16th, 1917, Captain F. M. M. Ommanney, R.A.M.C. (retired), dearly loved son of the late Colonel Edward Lacon Ommanney, C.S.I., and Mrs. Ommanney, of Blackheath, aged 38. Requiescat in Pace.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

IN the course of the next fortnight the Hospital will again be faced with the question whether it can obtain a sufficient number of qualified men to meet its requirements for Residents during the coming three months. The usual rumour that all men are to be called up for service as soon as they qualify is in circulation, but we have little doubt that it is as baseless as most rumours. In view, however, of the fact that a relatively small number of men are up to qualify in the present conjoint examination, the prospects of obtaining eleven qualified Residents are not too bright. On the other hand, it would appear that there are a considerable number of partially qualified men who would be able to do unqualified appointments, which might allow of a reduction in the qualified men. At present the number of House-Surgeons remains the same as before the war, though their duties have been increased by the abolition of Assistant House-Surgeons. If there are a sufficient number of suitable unqualified men it might be possible to re-establish the appointment of Assistant House-Surgeons, and, if necessary, reduce the number of qualified House-Surgeons to two, who could exercise a general supervision. The difficulty about surgical "take-in's" could be met either by the two House-Surgeons "taking-in" alternate weeks or by allowing the qualified Out-Patient Officers to admit surgical cases. Much of the work of a House-Surgeon could be done by an unqualified man, assuming that he has someone more experienced who can easily be called to see a case. Had it been possible to retain the services of a Resident Surgical Officer with the skill and capacity for hard work of Mr. Tanner, we believe that it would have been possible to run the whole surgical side without any fully qualified House-Surgeons.

Everyone will agree that the more qualified Residents the Hospital can obtain the better it is, but under the stress of war we must adopt the next best plan and utilise the services of those whom we can get, qualified or not. The only alternative would appear to be the introduction of female residents, a step which we think would hardly commend itself to many connected with the Hospital, until all other means of dealing with the situation are exhausted.

WE hear rumours that the Staff will probably be further depleted by the posting of one or more of our physicians and surgeons to hospitals in France. Apparently the latest Ger-

man outrages on hospital ships are necessitating the retention in France of more wounded than has hitherto been the case. Unpleasant as this may be for the wounded themselves, it is a step which will probably lead to a more rapid return of wounded to active service, which is, we imagine, the last thing the Germans aimed at when they started their campaign against hospital ships.

Without wishing to enter the controversial field of the ethics of reprisals, it is difficult to see how the bombing of Freiburg is to help the Allies. No one can believe that the death of a few women and children and one soldier is going to repay us for the loss of three aeroplanes and worse still at least three pilots, of whom we have none too large a supply at the moment. The Zeppelin raids on this country have clearly demonstrated the futility of "frightfulness." Any attempts we may make to out-Hun the Hun will only have the effect of strengthening the adherence of the German civilian population to the extremist military party in Germany.

We hear that the exemptions obtained by Mr. Bromley for five medical students before the Southwark Tribunal have been appealed against by the Military Representative. We trust that his appeal will not be successful. A great deal is said about the shortage of doctors for the R.A.M.C., but the military authorities do not seem to realise that a man who has spent three years in medical study is worth keeping for anything better than cannon-fodder.

The dining-room in the College is now subject to the Food Controller's regulations for restaurants. The first meatless day menus appeared on April 17th. An ample choice of dishes was given which satisfied even the most exacting. One change which has been brought about by the new system is that the waste of bread which was so common previously is now no longer seen.

We regret to hear that Ernest Harry Richards, formerly a student at Guy's, was killed on April 2nd while serving in France with the 21st Manchester Regiment. He joined the Artists' Rifles in November, 1915, and obtained a commission in December, 1916.

The recent casualty lists include the name of Lieut. S. A. Sharpe, who left the Hospital to join the Royal Flying Corps in 1915. He is reported as missing, and we can only hope that he will prove to be a prisoner.

On Wednesday, April 25th, at 5.30 p.m., Dr. M. S. Pembrey is giving a lecture at the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W., on "The restricted supply of food: its relation to health and efficiency." There will be a discussion. The Hon. Sir John A. Cockburn, K.C.M.G., M.D., will take the chair.

We congratulate Lieutenant W. Burridge, R.A.M.C., on being awarded the Radcliffe Prize, Oxford University. We believe that only once before has the prize gone to a Guy's man, when it was awarded to Dr. Hurst.

"It is safer to be an infantryman in France than an infant under one year at home."—Dr. Henderson, County M.O.H. for Westmorland.

As we go to press we hear that Mr. Steward has left the Hospital to take charge of the Surgical Division of a General Hospital in France. His appointment there lasts three months, after which time we hope to see him back. All Guy's men will join us in wishing him every success in his new sphere of action.

Obituary.

Lieut. R. V. KNIGHT, R.N.A.S.

The late Lieut. R. V. Knight, R.N.A.S., who was killed in England on March 12th through his machine coming down in a spinning nose dive, was formerly captain of Bedford School. While there he played three-

quarter in the County Championship for the East Midlands, and later on in the same competition for his home county of Somerset. While in his 'teens he was reserve three-quarter for the English XV.

He joined Guy's as a Dental Student in May, 1914, but joined the University of London O.T.C. at the outbreak of war, and from there obtained a commission in the London Rifle Brigade serving in France for over a year. Afterwards he transferred to the Cyclist Corps, and finally joined the Navy.

Since leaving Guy's he has played several times for the latter. A big, powerful runner, with a fine hand-off and a good knowledge of the game, he was also an excellent place kick.

He leaves a widow and daughter, and is the second captain of Bedford School Rugby of recent years to lose his life this year in a flying accident in England.

Lt. Knight, when at Neuchatel in Switzerland, started an Association Football Club, which has since carried all before it. He stood 6 ft. 2 in. and was broad in proportion, perhaps the reason of which he was known among his friends as "Tiny." During his winter holidays among the Alps he proved his skill at ski-ing, skating, and ice-hockey, while in summer he was devoted to cricket, tennis, and motor cycling.

His genial and generous disposition was such that he not only never did a mean action, but could not bear to entertain an unkind thought of anyone. He seemed to know practically everybody in the sporting world and will be greatly missed.

The late J. S. SELWYN HARVEY, M.D. (Durh.), M.R.C.P. (Lond.)

With the death, on Sunday, March 11th, of Dr. Selwyn Harvey, of South Kensington, there disappears a courtly physician of the old school.

A contemporary of the late Dr. Pye-Smith at Guy's Hospital, to which he was greatly attached, Dr. Harvey bore his advanced years exceptionally well to the last, continuing to see patients until quite recently. He had prac-

tised for many years in Boulogne before coming to London in 1890. Of equable temperament and unchanging kindliness, he was always, despite the cares inseparable from a large clientèle, happy to assist younger practitioners, whether by advice made valuable by his own ripe experience, or, whenever possible, by generous handing on of work. A man of cultivated taste and of varied interests, as well as of attractive and sterling character, Dr. Harvey will be greatly missed by a large circle, and by none more than by the writer—himself an old "Guy's" man.

Lieut. ANDRE BOUIC.

All those who have known him must feel deeply grieved at the death of Lieut. André Bouic in the Royal Flying Corps. He passed his Second Conjoint at the beginning of last year, and though he was perfectly justified in staying on at the hospital, he felt it his absolute duty to join the forces. He did so, leaving behind great affections, above all his fianceé, to whom he had only a few days previously become engaged. His sense of duty and uprightness was so great that once he had made up his mind he never hesitated. No one who knew him could fail to appreciate his most charming and attractive personality. His brilliant intellect, combined with his devotion to his friends made him a great favourite wherever he happened to be.

He died gloriously, serving his country and in a manner becoming his generous nature. We can only wish he could see how his memory is dear to all he left.

Honours.

Mentioned in Despatches.

Temp. Col. J. Atkins, C.M.G., A.M.S.

The Physical Treatment of Wounded.

Elastic Support in Muscular Paralysis.

The final treatment of wounded men who have passed the stage of active surgical interference presents many points of difficulty and interest.

Here at Rotorua we have treated over seven hundred cases with baths, massage, electricity, and other physical means, and some preliminary notes may be of general interest, and of special interest to members of Medical Boards who have to make decisions about the discharge or further treatment of wounded—decisions of far-reaching importance to the patient. I am emboldened to do this by the hope that the experience gained by many initial mistakes, and consequent failures of treatment, may be of service to others carrying on the same work.

It is not proposed here to discuss the physical treatment of the multifarious disabilities arising from war injuries—the subject is too large and would take up too much space—but rather to narrow down the question to the treatment of muscular paralyses due to injury of the nerve trunks, of the central nervous system, or of the muscles themselves.

Treatment of these injuries at a base hospital resolves itself mainly into relief of pressure, suture of nerve trunks, and transplantation of tendons, followed by massage, electrical treatment, and judicious rest and exercise.

The case is then sent home or to a convalescent hospital, and I would advance the plea that in this particular class of injury every case should be sent, not home, but to a convalescent hospital, and to one fitted up with the special facilities for treatment.

I.—INJURY TO A NERVE TRUNK.

To take the most characteristic type, let us consider the case of injured nerve trunk, *e.g.*, due to bullet wound.

The nerve may be injured by concussion, may be partly severed and pressed on by fibrous tissue, or may be wholly severed, with perhaps a wide interval between the severed ends.

(a) Concussion or Bruising.—This may be of any degree of severity, from the lightest, involving temporary loss of function, to the severest, in which function cannot be re-established by the most patient and persistent electrical treatment and rest.

These are, to all intents and purposes, strictly analogous to ordinary cases of peripheral neuritis, with all the consequent disabilities of muscular paralysis, anæsthesia, hyperæsthesia, and trophic changes; and there is indeed a true neuritis, with tenderness of the nerve trunk away from the seat of lesion. Though continuity of the nerve trunk may be presumed by finding distal sensation on pressure on the nerve on the proximal side of the lesion, the case may refuse to respond to ordinary treatment. What is to be done? In the first place reliance cannot be put absolutely on this latter symptom, for stimulation of the proximal end of a cut nerve trunk may cause distal sensation, as is familiar in amputation cases. But, assuming that electrical and other tests show probable continuity of the nerve, what is to be done?

One must advise patience, and yet more patience, provided always that the nutrition of the parts supplied by the nerve can be maintained. The first signs of improvement may only begin to be manifested after many months of treatment, and if nutrition of the affected muscles can be kept up by massage, electrical stimulation, and the hyperæmia induced by hot mineral water baths, one can afford to wait.

The treatment of the consequent muscular paralysis is strictly analogous to that of infantile paralysis, and it was through the consideration of the treatment of this disease that I was able to explain and rectify the many failures of treatment that I at first experienced.

At first it was found that cases of ulnar and median paralysis almost always recovered under treatment; cases of musculo-spiral paralysis very seldom. Consideration showed that this was due to neglect of the primary precaution necessary in the treatment of infantile paralysis. *A paralysed muscle must not be allowed to stretch even for a minute*, such as in washing the hands or undergoing treatment. In ulnar and median paralysis the risk of such a stretching is not serious, even without adopting precautions; in musculo-spiral paralysis incautious removal of a splint for a few minutes may undo the work of months. As soon as this elementary fact was seized, my cases of musculo-spiral paralysis improved in the same ratio as the others. The permanent use of a splint, however, is a very irksome business, and I devised an elastic tractor to the back of the hand, leaving the fingers free. This, however, was soon discarded in favour of the Souttar glove,* which not only hyperextends the hand, but by maintaining the extensor tone of the fingers causes them to extend automatically after flexion. The use of this glove enables a man with paralysis of the musculo-spiral, but with the median and ulnar nerves intact, *i.e.*, a practically useless hand, to pick up and grasp easily all but very small objects. His disability is at once reduced one-half.

The same principle was then extended to the leg. It is a noteworthy fact that in paralysis due to wounds, as in infantile paralysis, it is the mechanically weaker extensor muscles rather than the flexors which are more frequently affected. It is also a fact, unfortunately, that it is more difficult to overcome the disabilities caused by extensor than flexor paralysis, and it is an axiom in physical development that,

B.M.J., April 22nd, 1916.

if the main training be devoted to the extensors, the flexors will largely look after themselves.

As a consequence, in the larger proportion of my cases it has been found necessary to use elastic tractors on the extensor surfaces of the limbs, either for the temporary assistance of paralysed muscles, or, in more rare instances, in permanent substitution for them. In paralysis of the quadriceps femoris an elastic band from the waist down the front of the thigh and leg, and attached by a bifurcated strap to the fore part of the sole of the boot, enables the leg to be used in walking without straining the affected muscle; and thus we have available in treatment not only the abnormal stimulation of the muscle by massage and electricity, but the even more potent *normal* stimulus of voluntary effort towards using the muscle, without the dangerous elements of stretching and over-fatigue.

A man, even with absolute paralysis of the quadriceps, can walk quite well with one of these simple and inexpensive devices, a great aid in the restoration and maintenance of his general health and vigour.

Again, in paralysis of the peronei, a frequent result of gunshot wound of the sciatic, a strap tractor to the outside of the sole of the boot will prevent inversion and permit of voluntary exercise. The strap may be of elastic or of leather, according to the severity of the case.

Even should all hope of restoration of function be out of the question, the elastic band can permanently take the place of the lost muscles.

(b) The nerve may be partly severed or be pressed on by fibrous growth.

(c) There may be complete loss of continuity of the nerve.

In both these cases, of course, no physical treatment will be of any avail until the gross lesion has been repaired by operation, but every surgeon will agree that the immediate results of operation are by no means entirely satisfactory in the majority of cases.

The after-treatment of these cases will be very much more satisfactory if the hyperæmia induced by mineral water is added to massage and electrical treatment. No treatment, however, will avail unless adequate rest to the affected muscles is provided; and, for reasons already given, after a certain stage has been passed, the rest afforded by elastic support will be found more efficacious, as well as more tolerable, than that by rigid splints.

II.—INJURIES OF THE CENTRAL NERVOUS SYSTEM.

Muscular paralysis due to infantile paralysis can be most satisfactorily treated by the same methods. Whether the disease is primarily an anterior poliomyelitis, or whether a primary disease of muscle as recently claimed, the treatment is directed chiefly to the muscle and not to the nervous system. In the early stages, and at night, an ordinary fixed splint may be advisable, but, directly there is any beginning of function of the affected muscles, elastic splints will be found invaluable. Finally, in cases which show no signs whatever of recovery, a patient with, say, complete paralysis of the quadriceps and peronei, may walk about with little assistance with caliper splints, and rubber bands replacing the muscles. With such a paralysis on one side only, the patient can walk quite well without the aid of even a stick, using an apparatus like that shown in the figure.

Hemiplegia, whether due to bullet wound or to cerebral hæmorrhage, may, in selected cases, be successfully treated by the apparatus

shown in the figure, and I have several patients now walking about quite comfortably who would otherwise be in a wheeled chair or on crutches.

Gunshot wound of left side of skull; paralysis of extensors of right hand, quadriceps, and extensors of toes. Patient, with apparatus fixed, can use right hand and walk without a stick. The apparatus consists of a modified Souttar glove supported from a moulded leather shoulder cap, and a long elastic extensor band down the front of the thigh and leg inserted by a bifurcated leather strap into the fore part of the boot.

Cerebro-spinal meningitis, spinal meningeal hæmorrhage, and similar lesions may leave as a consequence paralysis, spasm, or violent uncontrollable localised clonic contractions, which may be greatly relieved by a judicious combination of rigid and elastic splint. In one case there were such violent clonic convulsions of the right leg on rising from a sitting to a standing posture that the patient had to hang on to a table on these occasions, while his foot beat on the floor

a tattoo that could be heard all over the ward. With the apparatus shown he can speedily control the convulsion and can walk with ease.

III.—INJURIES TO THE MUSCLES.

Injuries to the muscles themselves can be treated on the same principles—either by aiding a weakened muscle by an elastic band, or by increasing the pull of the opposing muscle where the affected one is shortened.

IV.—DEFORMITY DUE TO FLEXION OF ADHERENT JOINTS.

Deformity due to flexion of adherent joints, as is well known, may often be reduced by the steady pressure of elastic bands, applied with the limb fixed to a rigid splint, and with a cautious eye kept on the circulation.

I have not attempted to exhaust the subject of the sphere of usefulness of elastic traction, but rather to indicate a few of its more important applications in the treatment of wounded men, and a little consideration will doubtless suggest numberless extensions and modifications of the principle. The points to which I would draw attention are its great adaptability, its comfort, and its simplicity and cheapness.

Change of Address.

Capt. Donald C. Scott, R.A.M.C., 1/4 Duke of Wellington's (West Riding) Regiment, B.E.F.

X 225 Pte. A. Weinberg, S.A.M.C., 1st S.A. Field Ambulance, B.E F., France.

W. Burridge, Lieut. R.A.M.C., D.M.S., Valetta, Malta.

A. H. B. Kirkman, F.R.C.S. Eng., from R.A.M,C. to Notherhayes, Seaton, Devon.

P. S. Henry, L.D.S , from 27, Nicholas Lane, E.C., to 78-79, King William Street, E.C. 4.

W. A. Dredge, L.D.S., from 10, Bryanston Street, to 81, Wimpole Street, W. 1.

Capt. R. C, Matson, R.A,M.C., McGrigor Barracks, Aldershot.

Capt. F. G. Vicars, R.A.M.C., from 2/5 Royal West Kent Regiment, to 322nd Welsh Field Ambulance, Harrogate.

Appointments.

R.N.M.S.

The following appointments have been made :—

Staff Surgeon G. Nunn to the *Pembroke*.

F A. Knott to be Temp. Surgeon, R.N.

Temp. Surg. H. S Brown, M.D., to Royal Military Depot, Deal.

R.A.M.C.

Major R. P. Lewis relinquishes the acting rank of Lieut.-Colonel on re-posting.

Temp. Lieuts. to be Temp. Captains :—P. R. Eskell, L. R. Pickett.

To be Temp. Lieutenants:—W. H. Miller, M D., F.R.C.S., A. Armer, M.D., E. Wragg.

R.A.M.C. (Territorial).

Lieutenants to be Temp. Captains whilst serving with the Medical Unit of the University of London Contingent, Senior Division, O.T.C., J. H. Ryffel.

Lieut. J. S. Cooper to be Captain.

Army Dental Appointment.

Temp. Lieut. to be Temp. Capt.—F. E. Welton.

Civil.

A. E. Clark, M.D. Lond., has been oppointed Certifying Surgeon under the Factory and Workshops Act at Rickmansworth.

C. D. Outred, M.R.C,S., L.R.C.P., has bean appointed Certifying Surgeon under the Factory and Workshops Act for Gravesend District.

Roll of Honour.

Killed in Action.

Reported missirg October 16th, 1916, now reported killed in action, Valentine Francis Herbert Hugill, Despatch Rider attached R.E., 2nd Lieut. 16th Royal Fusiliers, attached R.F.C.

E. H. Richards, 2nd Lieut. 21st Manchester Regiment, killed in action at Croisilles, March 2nd.

Wounded.

Capt. P. R. Bolus, R.A.M.C.

Capt. G. F. Hardy, M.C., R.A.M.C , attached to Royal Garrison Artillery.

Estimation of the Renal Function: Cystoscopic Examination in Renal Disease.

CLINICAL LECTURE BY A. R. THOMPSON, Ch.M., F.R.C.S.

Gentlemen,—There are preliminary difficulties in the attempted passage of a cystoscope along the urethra into the bladder. First of all, there may be a very small meatus. This difficulty is, as a rule, quite easily overcome by doing a meatotomy at the time of the cystoscopic examination. Or there may be a stricture of the urethra. Very occasionally, an enlarged prostate, especially if it be hard, offers difficulties to the passage of a cystoscope, but only very occasionally. Finally, the urethra itself may be of such small calibre that an instrument cannot be passed along it.

There are also other difficulties connected with the successful examination of a bladder when the urethra has been passed. First, there may be cystitis, precluding the filling of the bladder with even two ounces of fluid, which is the minimum necessary for a cystoscopic examination. In addition to this, there may be a pelvic tumour preventing the bladder from being filled at all. And, because I have met with it very frequently in the post-mortem room in attempting to pass a catheter so as to fill up the bladder, I mention also ascites as a possible cause of increased extra-vesical pressure and thus inability, on the part of the operator, to fill the bladder with an adequate quantity of fluid.

Other difficulties which may be met with in cystoscopic examination are hæmaturia and pyuria, both of which may be, and are very frequently, overcome for the short time necessary for the examination, but may be, especially in the case of hæmaturia, so excessive that it is hardly possible to make a cystoscopic examination.

The next question which presents itself in a scientific investigation into the use of the cystoscope is as to whether you should examine through the patient's own urine, or through fluid which has been injected into the bladder.

In connection with examining through the patient's own urine, you cannot know how much urine he has got in his bladder. It is of no use to talk about two-hours' urine or three-hours' urine: it is the quantity that is important. Possibly one patient is passing a good deal of water from his kidneys into his bladder when he thinks a cystoscopic examination is going to be made on him, while another patient may be quite phlegmatic about such an examination. Another disadvantage is, that there is no air-bubble at the fundus of the bladder, as when fluid is injected. The air-bubble is introduced through catheterisation when you put fluid into the bladder, and it forms a very useful point of repair for investigating the anatomy of disease in the bladder. It naturally occurs at the topmost point of the bladder when the patient lies down, which is, approximately, the fundus. But if no fluid is injected, one of the chief points of repair becomes untrustworthy.

Another disadvantage is, that there may be phosphaturia. For example, if you try to examine a bladder two hours after lunch, you will probably find phosphates in considerable quantity, and as these are heavier than water, they gravitate to the bottom part of the bladder, which is the important part when you are attempting to investigate the condition of the kidney. I am not, of course, including hæmaturia and pyuria in this. I imagine you would not examine through a patient's own urine when you knew he was passing blood or pus.

The next thing I would like you to pay attention to is the appearance of the bladder as interpreted by the cystoscope. On the head of the cystoscope, which is metal, and circular, there is a beak or button, and that button points in the same direction as the beak of the cystoscope; in other words, the little button is in the same plane as the beak.

First of all, introduce the cystoscope into the bladder, having already made sure that your instrument is working satisfactorily, not only optically, but also electrically. Turn on the light, and keep the cystoscope in the same position when you introduce it. Try and find that first point of repair which I spoke of just now, namely, the bubble at the fundus of the bladder. Then turn the cystoscope round to 8 o'clock, or 4 o'clock, so that the beak is pointing downwards and to the right, or downwards and to the left. Draw the cystoscope backwards until the prisms just engage the neck of the urethra, that is to say, come into contact with the neck of the bladder and become obscured, then push the cystoscope into the bladder for a distance of 3 c.m. Then, with the usual type of cystoscope, you see the ureteric ridges, with the ureters upon them, usually in a symmetrical position. But you only see, with the cystoscope, the part I dot in in my sketch. I have seen both ureters in the same field of the cystoscope, and no doubt, if you get the fluid in sufficient quantities into the bladder, and the cystoscope sufficiently far away from the base of the bladder, you might always see both ureters and all the ureteric ridges. But, as a rule, with a normal amount of fluid in the bladder and with ordinary cystoscopic examination you only see an inch, or a little more, of the bladder wall at the same time.

Difficulties may occur in connection with the bladder. The ureteric ridges may not be symmetrical. That is due, in a great number of cases, to asymmetry of the bladder. I have specimens of three bladders, rough representations of which I will draw on the board.

Here are some fossæ in the bladder, on either side of the vagina and rectum, fossæ which, so far as I know, have not been previously described. In another bladder there is a very big fossa at one side of the rectum, while on the other side of the rectum there is no fossa. That would lead to an asymmetrical position of the ureteric ridges. Thirdly, I have got a bladder in which one ureteric ridge was very much longer than the other, and hence the ureteric orifices were asymmetrical in position.

I do not propose to go into the question of the manipulation of catheters along the cystoscope, on this occasion, because that is a matter which can only be usefully talked about at a demonstration; but, assuming that you have succeeded in introducing catheters into the ureters, what diagnosis of renal disease may we make, and how may we make it?

First of all there is the physiological method. There used to be a very complicated system of diagnosing renal disease. First, there was the injection of methylene blue, or sulph-indigotate of soda, into the body and noting the appearance of the urine as it came down through the ureteric orifices coloured blue. Methylene blue may be injected into the wall about ten or fifteen minutes before the examination; but sulph-indigotate of soda comes through so quickly that it should be injected only at the time of the examination.

Secondly, that which is obviously a common-sense method, and which I wonder did not occur to the examiners beforehand, namely, the estimation, by chemical means, of the urine coming down from either kidney, and collected *at the same time*, which is very important. If you wish to examine for kidney disease, examine both kidneys at the same time.

I have put the physiological method first because, although it may not appeal to our patients so much, I think it is much the most important examination you can make of the kidneys.

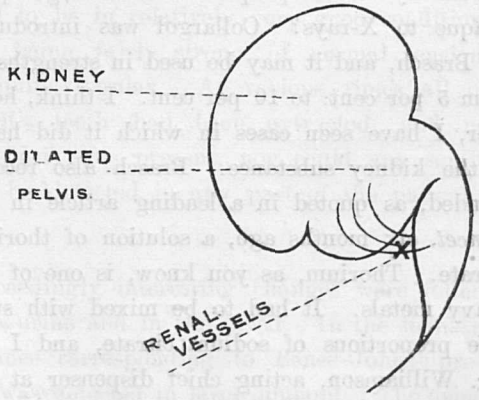
But there is another method, whereby you can introduce some material into either ureter and attempt to see whether there are any essential differences on the two sides. I shall call that the anatomical method.

We will first consider the method without the assistance of the X-rays. There may be an obstruction to the passage of a catheter. There may be a difficulty in engaging the orifices of the ureter. You may have difficulty in pushing the catheter up any reasonable distance along the ureter. Also, however carefully you may pass a catheter up the ureter, in a certain number of cases, undoubtedly, you do damage to the ureteric wall and produce hæmorrhage. And it does not seem to matter whether you pass a thick catheter, or a small one. When hæmorrhage occurs, it vitiates the results very much indeed.

Having succeeded in passing a catheter along either ureter, you may see what amount of fluid the pelvis of the kidney holds, by funnelling in a certain amount, and compare the quantity held by the pelvis of each. Or you may assure yourself that none of the difficulties I have mentioned occurred. If, under these favourable circumstances, there is obstruction to the passage of the instrument along the ureter, you know that the ureter must have some obstructing or constricting mechanism inside it, either congenital stricture or, more commonly, calculus in the ureter.

Now a word about examination with X-rays. It becomes necessary to know something about the anatomy of the kidney and the ureter. The kidney lies athwart the last rib. The ureter, descending from the kidney, passes close to this spot and, at the level of the third lumbar vertebra, it lies upon the vertebral column. Lower down, the ureter leaves the vertebral column, and travels practically parallel with the pelvic margin until it reaches the bladder, where it passes inwards, and possibly slightly upwards, to the orifice of the ureter in the bladder. Knowing the position of the ureter and of the kidney, with an opaque substance in the ureter and in the pelvis of the kidney, you are able to get a more or less accurate representation of what is actually present, and to photograph it.

First of all, I would like to draw your attention to the case of Herbert S., a man who was recently under my care on account of very marked symptoms associated with renal colic. I ask you to look at this photograph which I hand round. The ureter in this case is a little further out than usual. Although in the region of the fourth lumbar vertebra, it is in contact with the vertebral column. You can see the opaque material lying in the ureter, and there is clearly a very opaque mass to the right of that material, lying in the region of the lower pole of the right kidney. At the side of the shadow is the ureter. Now, what is the correct interpretation of that? Clinically, he had very marked renal colic, with vomiting, and the passage of blood. The renal colic bore no relation, as far as I could make out, to exercise. What we actually found at the operation was this:



What we did at the anatomical investigation was, to inject an opaque material into the ureter and into the sacculus of the pelvis of the kidney. What condition gave rise to this sacculus, with a distinct valvular formation between the ureter and the pelvis of the kidney? The answer is, "aberrant vessels," and if I get another photograph like that I shall diagnose aberrant vessels. That illustrates, very well, *the anatomical investigation of kidney disease.*

The anatomical method is also very suitable in connection with hydronephrosis due to movable kidney. I show you two photographs. Figure 6a is a hydronephrosis, figure 6b is the normal kidney on the other side. Notice how enormously increased is the area of the pelvis. That was in association with movable kidney with hydronephrosis.

Or one may find a displaced kidney, and I show you a skiagram of this. The transverse bar seen is at the level of the umbilicus, and you will notice that the tip of the catheter is stopped at that level, and that the opaque mass in the pelvis of the kidney is also at the level of the umbilicus. Therefore, clearly, that being an adult kidney, the kidney was displaced downwards. This also was in relation with increased mobility of the organ.

What is the material which is injected into the kidney for the purpose of rendering a part opaque to X-rays? Collargol was introduced by Brasch, and it may be used in strengths of from 5 per cent. to 10 per cent. I think, however, I have seen cases in which it did harm to the kidney substance. Brasch also recommended, as quoted in a leading article in the *Lancet*, six months ago, a solution of thorium nitrate. Thorium, as you know, is one of the heavy metals. It had to be mixed with suitable proportions of sodium citrate, and I got Mr. Williamson, acting chief dispenser at the Hospital, to make up a solution. He took a lot of trouble in connection with it, but, in my opinion, it was not of the slightest use. Having had a not altogether pleasant reminiscence in regard to the injection of collargol—although in many cases it gave an excellent shadow—and having no use for thorium nitrate in sodium citrate, I have been making a few investigations into the degrees of opacity of, let us say, more simple fluids, and I find that a 5 per cent. solution of silver nitrate is almost as opaque as anything you could wish to have. It is, for instance, a good deal more opaque than gold chloride. Do not take this as authoritative as I am still working at the subject, and it is just possible that the strength I mention may cause some damage to the kidney. The man with aberrant vessels, whose skiagram I showed you, developed pyonephrosis of the right kidney. We made a renal fistula and allowed drainage. Then the urine became clear again, as it had been after the former operation. Considering that his kidney was probably slightly infected, I thought it justifiable, having gone into the question of the silver nitrate, to inject a 5 per cent. solution of it through the renal fistula into the pelvis of the kidney. We were then able to obtain a most excellent radiogram of the kidney, and I think we were warranted in our procedure, because when the fistula closed there was no residual pyonephrosis, showing that this strength nitrate did no harm in this particular case.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the Gazette *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

A Case of Bence-Jones' Proteosuria.

Emma B., spinster, æt. 63, domestic servant, was admitted to Guy's Hospital, under Dr. Beddard, on October 23rd, 1916. The patient gave no history of any previous illness whatever, except a tendency to fortnightly bilious attacks during most of her life. Her parents both had excellent health and lived to an old age, but her two brothers both died in middle life from phthisis.

Three months before admission patient first experienced a sensation of abdominal fulness, but without pain or nausea and without relation to ingestion of food. At this time, or perhaps a little earlier, the attacks of biliousness ceased and have never since recurred. For one month the condition remained stationary to patient's own observation, except that she became thinner. At the end of that time, *i.e.*, two months before admission, she noticed that the distension was more apparent on the left side of her abdomen and, a little later, that a hard tumour could be felt in this region below the costal margin. No real pain was experienced, only abdominal discomfort of a dull, aching character, which patient was convinced would be relieved by vomiting. This was, however, not the case, and she never at any time had feeling of nausea.

The condition described continued up to the time of admission with only slight increase of abdominal discomfort and slow continuance of loss in weight. The distension appears to have been less in the morning before rising, and to have increased as the day advanced. Urinary symptoms or constipation were not at any time noticed.

At time of admission, patient's complexion and general appearance suggested a state of fairly good health when her age was taken into consideration, but she was very thin. There was a marked spinal curvature, with the main dorsal curve towards the left with thoracic rotation. Of this condition, the history dates from an onset when patient was sixteen years old and it was her duty to nurse an abnormally heavy child. The deformity was at the time untreated, but does not appear to have increased until two years before admission, since which time it has slowly, but definitely, become worse.

Examination of the abdomen showed general distension, but definitely more on the left side, where a hard tumour could be palpated lying immediately beneath the abdominal wall. Coming from beneath the left costal margin this tumour extended into the flank and reached downwards to within two inches of the pubic crest and to the right one inch beyond the umbilicus. Except for a small area below the lower margin of the tenth rib in the midaxillary line, there was no tenderness whatever over the tumour. It was considered that this tumour was undoubtedly a greatly enlarged spleen.

Apart from its deformity, the movements of the chest were normal and good, and no abnormality in the respiratory system could be detected. The cardiac and nervous systems appeared quite normal, and patient's arteries were found to be in relatively very good condition, pulse being fairly strong, of normal tension, and quite regular. At various times all of patient's teeth had been extracted, and no oral sepsis was present, nor could any septic focus be detected in any part of the patient's body.

Exceedingly interesting changes were found in the urine and in the blood. In the urine a substance corresponding to Bence-Jones' proteose was detected in large amount. The urine

was of normal colour and appearance, sp. gr. 1018; reaction neutral or faintly acid. Blood, pus, sugar, cellular or bacterial contents were not found to be present. On acidifying with acetic acid and gently heating a copious white coagulum appeared which entirely redissolved on heating to 100° C., and returned on cooling.

A copious precipitate was given with salicylsulphuric acid, dissolving on heating; a similar precipitate was produced by trichloracetic acid which mainly did not redissolve on heating. Strong nitric and hydrochloric acids both gave heat-soluble precipitates. Addition of an equal volume of saturated ammonium sulphate gave no precipitate, but addition of two volumes of same solution gave immediate strong precipitation.

Measured by an ordinary Esbach's albuminometer the proteose registered six parts per thousand of urine. The urine showed no other abnormality than the proteose, and there were no urinary symptoms whatever.

A systematic examination of the patient's blood immediately after admission to the hospital gave the following results:—Hæmoglobin 61 per cent., colour index ·6, total red cells, 4,760,000 per cubic m.m.; total white cells, 26,680 per cubic m.m.

A differential count of the white cells showed—

Polymorph. leucocytes ...	14·4	per cent.
Eosinophils	1·6	,,
Lymphocytes	82·4	,,
Large hyalines	1·4	,,

The lymphocytes were present in all stages of development, a relatively small proportion of mature small lymphocytes being observed.

In the ward the patient was confined to bed, given a full diet and kept under observation. A slight attack of bronchitis immediately yielded to treatment, and, although for the first week the abdominal discomfort continued, at the end of that time the patient declared herself much better, although the abdominal distension remained unaltered. Bowels and digestion were quite normal in action.

A systematic X-ray examination of the bones of limbs, pelvis, thorax, and skull was made, but failed to demonstrate any abnormality.

A series of plates of the spinal column was taken and showed in addition to the obvious curvature there was some indistinctness of outline in several of the bodies of the lower dorsal vertebræ which could not be attributed to photographic error. Further plates of the cervical and dorsal spines were taken, and the conclusion reached that the changes seen were those usual in old standing scoliosis, and that there was no evidence whatever of neoplasm in any part of the skeleton.

During this time, in all fourteen days, the only change noticed in the patient was a slight non-painful enlargement of two glands in right axilla and a few very small ones in the posterior triangle of the neck on the left side. The enlargement persisted, but did not increase beyond the size of a small marble.

On November 16th, 1916, no evidence of neoplasm having been found in any part, it was suggested that attempts should be made to reduce the splenic enlargement by means of application of X-rays. This treatment was carried out over a period of three and a half weeks, the rays being directly applied over the spleen through a five ounce lead plate for thirty minutes daily. Patient was also given small doses of iron and arsenic by the mouth thrice daily.

By December 12th, 1916, there was slight, but decided, reduction in the size of the spleen,

and patient's weight had slightly increased, but her general condition appeared to be stationary. At this point a second examination of the blood was made with result:—Hæmoglobin 61 per cent., colour index 1·1, total red cells, 2,650,000 per cubic m.m.; total white cells, 29,720 per cubic m.m.

Differential white count:—

Polymorphs	... ...	8·6 per cent.
Eosinophils	... ...	2·0 ,,
Lymphocytes	... ...	87·8 ,, *
Large hyalines	... ...	0·8 ,,
Basophils	... ...	0·4 ,,
Myelocytes	... ...	0·4 ,,

*Only 5 per cent. of these were normal mature small lymphocytes.

The considerable reduction found in the number of red cells was attributed to the increased destructive activity of the spleen as brought about by the X-ray treatment, and the application was therefore reduced in frequency and finally stopped on December 16th, 1916.

The patient was encouraged to get up daily, and the slow improvement in weight continued, but a further blood examination on January 6th, 1917, showed:—Hæmoglobin 64 per cent., colour index 1·2, total red cells, 2,550,000 per cubic m.m.; total white cells 36,040 per cubic m.m.

Differential white count:—

Polymorphs.	... ...	9·8 per cent.
Eosinophils	... ...	1·4 ,,
Lymphocytes	... ...	86·8 ,, *
Large hyalines	... ...	1·2 ,,
Basophils	... ...	0·8 ,,

*Less than 4 per cent. of these being mature lymphocytes.

The X-ray treatment was not recommenced in view of the tendency of the blood changes, and although the spleen remained slightly reduced in size and the improvement in weight continued, there was no decided change in the patient on January 23rd, 1917.

The slight glandular enlargement had practically disappeared and no new glands had appeared. Her weight chart read:—

December 6th...	... 6 st. 6 lbs. 0 oz.
January 3rd ...	... 6 st. 6 lbs. 10 oz.
January 10th ...	... 6 st. 7 lbs. 6 oz.
January 18th ...	... 6 st. 7 lbs. 10 oz.

Her temperature had never risen above normal during stay in the ward, and the proteose in the urine, although always present, showed a definite reduction in amount as measured by an Esbach's tube.

October 28th...	... 6	parts per 1000.
November 21st	... 5	,, ,,
December 16th	... $3\frac{1}{4}$	,, ,,
January 10th	... $2\frac{1}{2}$	,, ,,

No pain or disability of any kind appeared in any part of the body and no evidence whatever of growth could be found.

Throughout the month of January the patient insisted that she felt much better, and was finally allowed out of bed for short spells. Her weight increased up to 6 st. 8 lbs. 6 oz., and the size of spleen remained constant. A blood count showed no further diminution in the number of red cells, but also no tendency to improvement. No skeletal changes, or any fresh sign of any kind appeared.

In this condition the patient remained until February 23rd, when her friends decided to take her back to her home in the Midlands. After the journey she broke down and died the following day. No post-mortem examination was made.

F. A. KNOTT.

Leaves from a Surgical Note Book.

The Diagnosis of Appendicitis.

There are a number of acute conditions which may be mistaken for acute appendicitis. In many of these a diagnosis of "acute abdomen" only can be made, but, so long as the necessity of immediate operation is recognised and carried out, exact diagnosis is of little importance.

Again, with regard to the illnesses which may be mistaken for acute appendicitis, now that the "pathology of the living" is recognised, and we know that chronic appendicitis may cause symptoms which are indistinguishable from gastric and duodenal ulcer and even gall stones, we frankly call operative interference a laparotomy, and, instead of removing the appendix through a small muscle split incision, a right paramedian incision is made and the stomach, duodenum, gall bladder, appendix and other organs are all carefully examined. It is true that some surgeons claim to be able to examine the stomach, duodenum and gall bladder through a small muscle split incision in the right iliac fossa, but in order to avoid laying up a store of trouble for oneself, the surgeon, and especially the young surgeon, should perform a paramedian laparotomy.

We will now mention the conditions which may simulate appendicitis. Many of these conditions would not deceive the observant surgeon, but must be mentioned if only because they are of "academic" interest.

1. Calculus in the right kidney or ureter. Causes pain in the right side of the abdomen and vomiting. In renal calculus the pain is below the last rib, blood may be present in the urine, and the acute attack of pain may cause retraction of the testicle. In ureteric calculus, pain in loin or in front, but not at McBurney's point. After the pain ceases, blood-stained urine may be passed. X-rays.

2. B.C.C. pyelitis in women. Commonly associated with pregnancy. Urine acid, with pus cells and b.c.c. either in pure or mixed culture found. Deep tenderness and rigidity usually above the lower quadrant of the rectus.

3. The distinction between extracæcal and perinephric abscesses may cause difficulty. In perinephric abscess the swelling fills the right loin; there is pus in the urine. In extracæcal abscess the kidney may be felt behind and rather internal to the abscess.

4. Acute intestinal obstruction. May cause difficulty, but both conditions require immediate laparotomy. In obstruction the pain is of a griping character and is generalised over the whole abdomen. In mechanical obstruction there is no rigidity of the abdominal wall, in peritonitis there is general rigidity. In mechanical obstruction peristalsis may be visible or audible, in peritonitis the bowel is distended, but paralytic, and therefore at rest. In late or neglected cases of appendicitis with peritonitis and vomiting with much distension of the abdomen, diagnosis may be impossible. Again, there is an obstructive type of appendicitis in which vomiting and distension are the most marked symptoms. In these cases the inflammation at the end of the ilium causes obstruction. The appendix may be herniated into the ileo-colic or retro-colic pouches of peritoneum.

5. Disease of the gall-bladder. Stone or stones in the gall-bladder or abscess give rise to a swelling near the ninth costal cartilage. If no tumour is present, thrust the fingers under the costal arch and ask the patient to take a deep breath. As the diaphragm drives down the liver, the tender gall-bladder strikes the fingers, the inspiration ceases and a sharp pain is complained of. In very acute cases

this manœuvre is impossible, so marked is the rigidity in the subcostal region. Appendicitis may be associated with gall stones. In all doubtful cases both regions should be examined.

6. Duodenal ulcer, when perforated, may cause pain in the appendix region, but the muscular rigidity is not limited to the lower part of the rectus, the abdominal muscles are hard and fixed in the duodenal region. In late or chronic cases both regions must be examined.

7. Gastric ulcer. Perhaps a history of pain and vomiting after food or hæmatemesis. When perforated, diminution of the liver dulness associated with retraction of the upper abdomen, rigidity and tenderness. Rectal examination — fluid on both sides of Douglas's pouch. Acute ulcers in young women may give rise to much difficulty. The case of a young girl suddenly seized with acute pain at the umbilicus, generalised tenderness and rigidity, most marked to the left of the umbilicus, a rub at the base of the left lung. Laparotomy; no gas escaped, marked peritonitis over stomach and liver, hand in right iliac fossa pulled out a gangrenous perforated appendix with no limiting adhesions. Appendix removed, three drainage tubes inserted, pelvic abscess. Recovery.

8. Acute pancreatitis. History of gastric, duodenal or gall stone trouble.. Patient is very ill, but abdomen is distended and rigid only on deep palpation.

9. Thrombosis of the mesenteric vessels. Fat patient, evidence of atheroma and heart disease, passage of blood per anum.

10. Typhoid fever. Tenderness in right iliac fossa, distension of the abdomen. Perforation of ulcer gives rise to muscular rigidity from peritonitis. In ambulatory typhoid, first symptoms may be due to perforation. In typhoid, headache is marked, typical temperature chart, rose spots on abdomen, Widal positive after ten to fourteen days.

11. Moveable kidney. Inflammation of the appendix may be present as well. Causes nausea, vomiting, pain and perhaps tenderness in the right iliac fossa. When patient lies down and the kidney is replaced in its proper position, the symptoms disappear, but return again when the patient walks about. Dietl's crises, perhaps hæmaturia.

12. Fæces impacted in the cæcum may cause nausea, vomiting, pain and tenderness in the the right iliac fossa. Rigidity is not marked and the tumour has a characteristic feel. Administration of ol. ricini and massage establish the diagnosis.

13. Disease of the ovary. In ovaritis, the pain and tenderness are below McBurney's point. As a rule does not come on suddenly, the abdominal wall is not rigid, and the local and constitutional signs are not so severe. A twisted ovarian tumour may be felt on bimanual examination. It does not infiltrate the rectum like an appendicular abscess, and may be moveable under an anæsthetic.

14. Acute salpingitis may cause much difficulty. As a rule pain and tenderness are present in both iliac fossæ. A vaginal discharge may be present. Less rigidity than in appendicitis. Bimanual examination may reveal retort-shaped tubes. If in doubt, do a laparotomy.

15. Ectopic gestation. History of missed period, blood oozing from the os uteri. Evidence of fluid in Douglas's pouch and perhaps in loins, marked anæmia.

16. Inflamed lumbar glands. When both sides are inflamed and tender, the cause is pelvic in origin; if only on right side, due to appendicitis.

17. Pneumonia and pneumococcic infections generally. In pneumonia the pain is, as a rule, in front of the ribs, quickened pulse and respiration, percussion and auscultation give signs in the lungs. There are, however, cases of appendicitis with chest signs, and if rigidity and tenderness are marked, the abdomen must be opened. Caries of the lower dorsal spine should cause no difficulty in diagnosis. In pneumococcic peritonitis the abdomen should be opened. Girl aged twenty, pain in right iliac fossa, bowels not opened for four days. On examination: pain and rigidity in right iliac fossa, tongue dry, skin dry and flushed, temperature 103·5° F., respirations 36, no signs in lungs. Laparotomy: abdominal viscera appeared normal. An apparently normal appendix removed, when this was cut open, a few pin-point hæmorrhages were seen in the mucous membrane. Section of the appendix showed evidence of acute inflammation. On day following operation the temperature was 98·8°, and respirations were 24. Uninterrupted recovery.

18. Tuberculous peritonitis. Slow and quiet in its history and symptoms. Suggestive history. If laparotomy is performed there is a risk of tuberculosis of the operation scar.

19. Locomotor ataxy, or lead colic. "Gums and jerks." Intense and sudden pain, no rigidity when attack has passed off. Gastric crises, vomiting, eye changes; these cases are not urgent, so time may be allowed for their investigation.

20. Ileal kink. Subject of habitual constipation and chronic dyspepsia. Viscera dropped into pelvis. X-ray may show kink. Pain less severe on lying down.

21. Moveable cæcum. May cause symptoms by rotation which make an almost complete picture of appendicitis, but rigidity should not be so marked as to suggest immediate laparotomy without further investigation. In children diagnosis is particularly important owing to the rapid course of the disease, especially in the "fools' paradise" stage, when rigidity has passed off, the child feels better, but has an appendix full of pus on the point of bursting. Such an organ can often be felt.

22. Intussusception. Occurs, as a rule, in children under two years of age. The abdomen is quite supple between the attacks. Right iliac fossa is empty and tumour may be felt contracting under the finger. Blood and mucus per rectum, no bile on the finger.

Diminution or absence of superficial reflexes (abdominal) in peritonitis is often a helpful sign, especially if localised to one quadrant of the abdomen.

Causes of a tumour in the right iliac fossa:—

1. Appendicitis with plastic peritonitis around and walled in by omentum.
2. Appendicular abscess (a) extracæcal, (b) retro-cæcal, (c)retro-iliac, (d) leading into pelvis.
3. Ovarian cyst or fibroma.
4. Twisted ovarian cyst.
5. Malignant ovarian cyst.
6. Subperitoneal fibroid.
7. Salpingitis.
8. Tubal gestation.
9. Gall-bladder.
10. Kidney.
11. Mesenteric cyst.
12. Aneurysm of iliac artery.
13. Undescended testicle.
14. Psoas or iliac abscess.
15. Ruptured muscle.
16. Interstitial hernia.
17. Growth of cæcum.
18. Tuberculous mass in cæcum.
19. Abscess around tuberculous mass in cæcum.
20. Sarcoma of ilium or pubic bone.
21. Perimetric abscess.
22. Parametric abscess.
23. Hydatid cyst.

24. Subphrenic abscess from right posterior intraperitoneal fossa.
25. Sacro-iliac disease.
26. Extraperitoneal rupture of the bladder.
27. Diverticulitis of the colon.
28. Actinomycosis of the appendix and cæcal region.
29. Volvulus of ileocæcal junction.
30. Growth of colon, with perforated distension abscess of the cæcum.

W. E. T.

Correspondence.

To the Editor of Guy's Hospital Gazette.

[We would point out that we cannot *under any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—Ed., G.H.G.]

Sir,—I have to thank you for the care and trouble you have taken in obtaining justification from Lord Devonport for your recently expressed views in respect of food rations at Guy's. The extracts from his reply are most interesting and instructive.

In view, however, of the continued waste, in bread alone, which is still being practised in the College, as evidenced by the large quantities of soiled bread left on the tables after meals, it becomes easy to see why the present scale of rations is insufficient for those who now take their meals in the College.

No doubt the contractors make some further use of wasted materials, but this cannot remove the responsibility of those members who are habitually careless in this respect.

I feel sure, Sir, that further exhortation on your part in this matter could not but do good.—I am, Sir, yours faithfully,

F. G. LLOYD.

c/o Admiralty,
London.
12th April, 1917.

Hand Ambulance Fund.

The following further subscriptions have been received:—

Charles R. Shattock, Esq.	£2	0	0
An Old Guy's Nurse	0	2	0

Subscriptions should be sent to the Manager, Gazette Office, Guy's Hospital, S.E. 1.

Royal Institute of Public Health.

A Second Course of Lectures on "Public Health Problems under War and after War Conditions" are being held in the Lecture Room of the Institute, 37, Russell Square, W.C., at 4 p.m. on Wednesdays. The next two lectures are as follows:—

On Wednesday, April 25th, Dr. Charles Porter on "Citizenship and Health Questions in War Time." Chairman, Stephen Walsh, Esq., M.P.

On Wednesday, May 2nd, C. W. Saleeby, M.D., on "Imperial Health and the Dysgenics of War."

Pass List.

University of London.

Second Examination for Medical Degrees.

Part I.—Organic Chemistry.

At the Examination held recently the following candidates were successful:—N. B. Dreyer, P. L. Richardson, J. St. Clair Shadwell.

Part II.—Anatomy, Physiology and Pharmacology.

At the last Examination the following candidates were approved:—J. V. C. Braithwaite, W. M. Brown, M. Cohen, G. Hume, *R. C. B. Ledlie, L. Lyne, G. Massie, W. W. Payne, S. Rose, A. E. Sawday, C. H. St. John, E. R. Webb.

*Distinguished in Anatomy.

Examining Board in England by the Royal Colleges of Physicians of London and Surgeons of England.

First Examination.

At the Examination held recently the following candidates were approved in the undermentioned subjects:—

Chemistry.—A. R. Patel, H. T. Chiswell, P. N. C. Conway-Jones, F. Bekker.

Physics.—A. R. Patel, F. L. Rayner, P. N. C. Conway-Jones, F. Bekker.

Elementary Biology.—H. T. Chiswell, H. V. Croucher.

Practical Pharmacy.—C. W. Lakin (Birm.), O. Halstead, W. R. G. Hearnden, A. Magill, E. H. Bryant, J. R. Cox.

At the Second Professional Examination of the Conjoint Board in Anatomy and Physiology, held March 28th and 29th and April 2nd, the following candidates were successful:—H. Ameen, H. M. Brown, S. Cohen, G. H. FitzGerald, G. K. Reeves.

Papers by Guy's Men.

W. Sampson Handley, M.S. Lond., F.R.C.S. Eng.: *Paget's disease of the nipple. Abstract of a Hunterian* Lecture delivered before the Royal College of Surgeons of England on February 16th, 1917.—*The Lancet*, April 7th, 1917.

R. H. Jocelyn Swan, M.S. Lond., F.R.C.S. Eng., Major R.A.M.C.: The treatment of severe gunshot injuries of the shoulder and elbow joints; early excision to secure mobility.—*Ibid.*

G. Garnet Ellis, L.D.S. Eng.: A case of ulcero-membranous stomatitis (Vincent's angina) terminating fatally.—*British Dental Journal*, April 2nd, 1917.

W. Burridge, Lieut. R.A.M.C. (from the Physiological Laboratory, Oxford): On the localisation of the calcium and potassium salts concerned in the mediation of the action of the vagus nerve on the heart of the frog.—*The Journal of Physiology*, March 20th, 1917,

E. W. Ainley Walker, M.A., D.M. Oxon.: The diagnosis of enteric fevers by agglutinin determinations.—*The Lancet*, April 14th, 1917.

D. G. Greenfield, M.D., F.R.C.S.: A note on skin grafting.—*The B.M.J.*, April 14th, 1917.

Specialities.

An improved Glass Irrigating Syringe.

(Patent applied for.)

Designed by H. J. Leviseur.

If the nozzle of the ordinary syringe is fine, the resistance to inflowing water is greater than the resistance of the plunger to air, and the result is that much air is drawn in past the plunger. If the nozzle is large, the syringe is easily filled, but in using it the fluid is very quickly exhausted and it must be filled repeatedly. Much of the irrigating fluid and of the dresser's time is wasted, and, in addition, no pressure can be obtained by such a syringe.

In the improved syringe a large sideway has been added, and through this the fluid enters. The resistance to the entrance is so small that, no matter how quickly the plunger is withdrawn, there is no entrance of air from behind the piston. The syringe is now withdrawn from the liquid and the finger placed over the large opening and the syringe used in the ordinary way.

The advantages of this type of syringe are:—

1. Fine nozzle.
2. Easy filling.
3. An ill-fitting or worn plunger makes little or no difference to the amount of liquid drawn in, so that a tight-fitting plunger with its attendant disadvantages is obviated.
4. If desired, a rubber tube can be attached to the sideway and left in the reservoir of liquid and the irrigation completed without removing the syringe from the wound, but seeing that rubber tube is closed by finger.
5. It is especially serviceable for irrigating sinuses, when it is desired to fit on to the syringe end a rubber nozzle with a very fine opening, the objection to which was, in the old type syringe, the difficulty of filling the nozzle in place.

Messrs. Down Bros., Ltd., St. Thomas's Street, London, S.E., are the makers of the syringe.

Communications received.

Messrs. Allen & Hanbury's, Ltd., send us a pamphlet entitled "Convalescence," which gives particulars of "Bynin" Amara and the other well-known malt preparations marketed by them.

Mr. Edwin Arnold informs us that a new work on "Midwifery" will be ready in May. Contributors to it are — H. Russell Andrews, F.R.C.P., J. D. Barris, M.R.C.P., F.R.C.S., Comyns Berkeley, F.R.C.P., Victor Bonney, F.R.C.S., H. Chapple, F.R.C.S., G. F. Darwall Smith, F.R.C.S., S. Dodd, F.R.C.S., J. S. Fairbairn, F.R.C.P., T. G. Stevens, F.R.C.P., and Clifford White, M.R.C.P.

Birth.

BULLEID.—On the 9th April, at 148, Argyle Road, West Ealing, London, W., Marian Louisa, wife of William Allen Bulleid, L.D.S., of a daughter.

Deaths.

BOUIC.—On the 31st March, killed in flying accident, Jules André Bouic, Lieut. Royal Flying Corps, youngest son of Jules Bouic, Esq., of Mauritius.

HUGILL.—Reported missing. October 16th, 1916, now reported killed in action, Valentine Francis Herbert Hugill, aged 22 years, Despatch Rider attached R.E., 2nd Lieut. 16th Royal Fusiliers, attached Royal Flying Corps, beloved and only son of Dr. C. F. Hugill, "Elmfield," 197, Balham High Road, S.W.

RICHARDS.—Killed in action, on March 2nd, at Croisilles, E. H. Richards, 21st Manchester Regiment, son of Mr. and Mrs. E. H. Richards, of "Verona," The Avenue, Eastbourne.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

FOOD CONTROL.

WE print in this issue a lecture delivered by Dr. Pembrey at the Royal Sanitary Institute on the subject of the Restricted Food Supply and its relation to Health and Efficiency. We advise a perusal of this lecture, together with a leading article in the *British Medical Journal* of April 28th, to all who are interested in the present situation.

The moral to be drawn from both these sources is that the Ministry of Food would do better if it paid attention to the established teaching of science, especially physiology, instead of relying on the more hustling methods of the company promoter. Lord Devonport may be a good business man, but he does not always seems to realise, as Dr. Pembrey says, "that the law of the conservation of energy applies to man." Perhaps indeed this is one of the terms to which the Food Controller was referring in the House of Lords when he spoke of his experts using "all sorts of curious expressions, which he was careful not to understand." Such a man might be suitable for John Bull's ideal of a Business Government, but if all departments are to be administered by men who "are careful not to understand," the outlook for this country is not a bright one.

The constructive part of Dr. Pembrey's lecture consists mainly of two proposals: first, the exercising of economy in the food supply for horses, and secondly, the cessation of the use of foodstuffs in the manufacture of alcoholic beverages. Since Dr. Pembrey's lecture we see that the Government have put a stop to horse-racing, and as Captain Bathurst was present at the lecture, we may assume that perhaps he is not unwilling to take a hint even from one "who understands." On the question of alcohol there are bound to be more differences of opinion. The food controller excuses his inaction in the matter by taking the view that alcohol is a food. Though this is true, there is plenty of evidence that the food value of alcoholic drinks is not proportionate to that of the materials used in their production. The truth is that the Government dare not face the powerful interests involved or incur the unpopularity of interfering with the "poor man's beer." Instead they content themselves with attempting to put the blame for the present position of affairs on what they are pleased to call the Old Gang, sublimely ignoring the fact that most of the members of the New Gang held important and responsible posts in the Old Gang which they revile.

Yet, even the economies suggested by Dr. Pembrey are not going to solve the problem of our Food Supply, though they might go some way in ameliorating the situation. Neither is the agriculture hustle a solution. The effects of bringing new land under cultivation cannot be felt to any great extent for at least a year. The only solution of the problem is that we should obtain a larger supply of food from abroad, and this can only be done in one of two ways, either by dealing with the submarine blockade or by building more ships. The former alternative does not look at the moment very hopeful, and therefore the most that can be done is to press on with the construction of ships. As the newspapers put it the other day, our cry ought to be Ships, Ships, Ships. And if the New Gang is to prove itself better than the Old, it must pursue this policy relentlessly. A man cannot work or fight without food, and if it is necessary men must be withdrawn even from active military service to assist in the campaign of providing more ships.

The Calling up of Medical Men.

Since our last issue something of a bombshell has fallen upon the medical profession. On April 21st a letter from Lord Derby was published in the newspapers intimating that the War Cabinet had decided to call up all medical men of military age. Words were quickly followed, if not preceded, by actions, and the Recruiting Department issued "call up" papers to all concerned summoning them for "service with the colours." Thus, at one blow all the machinery established for the supply of medical men for the R.A.M.C. and the safeguarding of the public was thrown out of gear. The whole scheme by which the Central Medical War Committee and the Committee of Reference controlled the supply of doctors was abolished, and no official warning of the intended move on the part of the War Office was given to either of these Committees.

The crisis was met by a joint meeting of the Committees on April 24th at which a resolution was unanimously adopted pointing out that the Committees could no longer bear the responsibility of protecting the medical needs of the civil community while meeting the requirements of the army unless they were allowed to retain the right of deciding what practitioners should be allowed to joint the army. A copy of their resolutions and a memorandum showing what some of the results of a sudden "call up" would be were sent to Lord Derby. The latter at once replied that the procedure previously prevailing with regard to the selection of doctors should be continued and agreed not to give a commission to any doctor except on the recommendation of the Committees. He continued, however, to say that if a sufficient number were not forthcoming, other measures might be adopted.

The undertaking given to medical men who enrolled with the Central Medical War Committee last year that they should have a month's notice before being called up, and that their contracts should be on a yearly basis, appear to have been cancelled. Also there is some doubt whether the outfit allowance of £30 is to be retained.

To anyone who views the matter dispassionately, the action of the authorities will seem high-handed and ungenerous, besides being callously indifferent to the needs of the civil population. No one can say that hitherto the medical profession have not responded with alacrity to every call that has been made on them, and to call medical men up for service with the colours is adding insult to injury. It is clear that an emergency has arisen owing to the attacks on hospital ships which necessitates great additions to the personelle of the

R.A.M.C. abroad, but why did not the War Office lay the matter before the Committees and act through them? Had they been approached they would have acted promptly and patriotically. The behaviour of the War Office is worse than that of the Government when it failed to consult the medical profession before introducing the Insurance Bill. It meanly relied on the patriotism of medical men to insult them with impunity. It is true that since the action of the Recruiting Authorities was taken Lord Derby has, to a certain extent, repented, but the situation is still by no means clear.

The present situation may, perhaps, justify the abolition of the one year contract system, and even the curtailment of the one month's notice, but if the War Office finds itself unable to fulfil its pledges in these respects they might have adopted some pleasanter way of repudiating them than the threat of instant enlistment as a private for anyone who dared to stand up against them. As a matter of fact, the great majority of general practitioners are at the present moment very overworked and would be only too glad to leave their present strenuous occupation for the comparative ease of the R.A.M.C. The threat of enlistment in the ranks was an unmerited and senseless insult.

Resident Appointments.

The whole question of Resident Appointments is one which is very much in the melting pot. All the old system of a succession of appointments terminating in House-Physician or House-Surgeon has had to go, and with the comparatively small number of men qualifying every three months there is difficulty in obtaining candidates for the important, but, perhaps, less attractive, appointment of Out-Patient Officer. The result is that in the present appointment list only two O.P.O.'s appear, and both are not yet fully qualified. The difficulty is not one which is likely to cure itself, and we shall be surprised if before long some drastic changes do not have to be made in the duties of the various Residents. The most obvious solution of the difficulty would appear to be that the work in the Surgery and Out-Patients should be fairly distributed among all the House Officers, both qualified and unqualified, for the principle is now definitely established that it is not necessary to have at all times a qualified man in the Surgery. There would not be insuperable difficulties in arranging that O.P.O. Medical Out-Patients, and the Back Surgery should be run by the House-Physicians and their assistants, while the Front Surgery could be dealt with by the other House-Officers.

Another obvious economy would be the abolition of "take in" House-Physicians and Surgeons. The members of the Staff who run Medical and Surgical Out-Patients can easily find out whether beds are available, in fact, they are already provided with a return showing the number of empty beds, and there is no real reason why the time of House-Officers should be wasted in being called to Out-Patients to see cases which, in practice, they almost always take in provided they have any beds. Similarly a qualified man running the Surgery might be entrusted with the admission of patients. Such a reform would not only economise the time of Residents, but would also diminish the congestion caused in the Surgery by patients waiting on couches to be seen by House-Physicians and Surgeons. The objection that might be raised that House-Physicians and House-Surgeons are more experienced than Out-Patient Officers now no longer applies, as, like all other Residents, they are usually recently qualified men doing their first House Appointment.

Torpedoed Guy's Men.

We hear that a number of the Residents who left us in January last for service in the R.A.M.C. in the East were torpedoed in the course of their voyage. We are glad to say that all the Guy's men on board escaped safely with nothing worse than the loss of their kit and a very unpleasant experience. They were Messrs. Gathergood, Heckells, Micklem, Sidebotham, and Traill.

On the other hand, on April 30th a gloom was cast over the whole hospital by the news that Lieut. I. R. R. Brogden was reported missing, believed drowned. His loss is one of the most bitter that the Hospital has suffered in this dreadful war. Universally popular and respected by the Staff, students, and nursing staff, he will be remembered by his many friends as a man whose example and character we may all strive to imitate, but whose perfection none of us will attain. We humbly offer our sympathy to his parents—his father is an old Guy's man—in the terrible blow which has fallen upon them. We hope to be able to print a photograph of him in a later issue.

Residents, Past and Present.

On May 1st we had to bid farewell to another set of Residents, most of whom are joining one or other of the services. The new President is Mr. H. E. Bamber, and we wish to offer him our congratulations on his appointment. We regret the loss of Mr. A. H. Taymour and Mr. Quesada, who have for so long earned the gratitude of the Hospital for all the work they have done during the shortage of men. We wish them and all others leaving us every success.

Publishers' Announcements.

We are glad to see in our advertisment pages the announcements of many of the leading medical publishers. In recent times the Gazette has not contained many publishers' advertisements. We welcome them for two reasons: One is, of course, that it all adds grist to the mill, and the Gazette is badly in need of it owing to the ever-increasing cost of production. The other is even more powerful. The announcements of new books in advertisement pages are matters of real interest to the majority of our readers. It is easy to see at a glance what new work is being published and thus to keep one's medical library up-to-date. We hope that publishers will see their way to continue favouring us with their announcements. In spite of the war and the shortage of paper, new medical works, many of them large and important, continue to appear. We hope that even if the paper situation becomes more serious, medical publishers will be given preference in the supply in order that the results of research and experience may be disseminated as widely as possible.

Course of Instruction in Venereal Diseases.

A second Course of Lectures on Venereal Disease is being held during the next three weeks. The lecturers are Mr. Thompson, Dr. Eyre, Mr. Bellingham Smith, Mr. Chapple, and Miss Rawlins. A full programme of dates will be found on reference to the advertisement pages.

Roll of Honour.

Killed in Action.

2nd Lieut. Herbert Snell, L.D.S., London Scottish Regiment.

Change of Address.

Philip R. Helyar, L.D.S., from 41, Eversfield Place, St. Leonards-on-Sea, to 38, Wellington Square, Hastings.

2nd Lieut. M. MacKenzie, Stewart Barracks, 1st Cavalry Reserve Regiment, Curragh Camp, Co. Kildare, Ireland.

2nd Lieut. G. H. Howe, from London Rifle Brigade to Guy's Hospital.

Lieut. W. F. Box, R.A.M.C., 4th Canadian Hospital, Salonika, c/o Army Post Office, London.

An Application of Chromic Acid Solutions to the Treatment of Gonorrhœa.

When it is found in a recent publication that something like fifty different injectionizing fluids are recommended as applicable to the treatment of gonorrhœal urethritis, it may seem a little superfluous to record these few notes on the action of a fifty-first, but it will be noticed that a very large proportion of these suggested fluids are both scarce and costly, while a considerable number are mysterious proprietary compounds which probably have an individuality in name only. Also authorities state that for acute cases there is need for nothing further than permanganate of potash in strengths varying to suit the condition, for chronic cases the same salt of zinc or very dilute solutions of nitrate of silver, and for cases of secondary infection oxycyanide of mercury in a dilution of 1 in 2,000, but the obvious condition is laid down that good clinical experience in detecting lurking causes of persistence and relapse must control their application.

In obtaining the material for these notes this condition has been to a great extent lacking, and hence the success attending the use of chromic solutions in the cases presently recorded is all the more striking in that they form a collection at random from the evening clinic of the new Venereal Diseases Department, and although only those are recorded which could be considered cured, none have failed to show sustained improvement and would, so it seems, appear in the list if time allowed us to await their complete recovery.

The chemical similarity between the chromates and permanganates with the balance of chemical activity in favour of the former suggested its application in this way, and it is found that the cleansing and oxidizing properties, apart from the germicidal power of the permanganates, are fully equalled, if not excelled, by the same dilutions of chromic acid.

The following few estimations were made to ascertain whether the germicidal powers of chromic acid were in accord with its chemical activity, and the results, best given in tabulated form, are shown below.

The first comparison was made between the actions of potassium permanganate and chromic acid upon the same strain of normal bacillus coli from the human intestine in a pure twenty-four hours' culture.

Graduated dilutions of the germicide in sterile nutrient broth were inoculated with equal amounts of β. coli culture. Tubes were incubated overnight and obvious growth of β. coli recorded in the table by an +, absence of growth by a −, while for confirmation a quantity of the broth from each tube was planted on to an agar slope and again incubated overnight, absence of growth on the agar slope next day meaning that the coli had not only been prevented from growing, but also killed.

I.

Pot. Permanganate Dilution.	Growth in Broth at 24 hours.	Subculture. Growth on Agar after 24 hours.
1 in 500	±	a few colonies.
1 in 1,000	+	++
1 in 2,000	+	++
1 in 4,000	+	++
1 in 8,000	+	++

II.

Chromic Acid Dilution.	Growth in Broth at 24 hours.	Subculture. Growth on Agar at 24 hours.
1 in 500	−	−
1 in 1,000	−	−
1 in 2,000	−	−
1 in 3,000	±	a few colonies.
1 in 4,000	+	++
1 in 6,000	+	++

These tables show a strong balance in favour of chromic acid, and as an approximation we may say that the actions of chromic acid 1 in 3,000 and pot. permanganate 1 in 500 are equal.

Still using the same strain of coli in twenty-four hours' culture, a comparative test was made, leaving the β. coli in contact with germicide and periodically planting samples of the fluid into a series of broth tubes and incubating for two days. In the tables the same signs indicate the life or death of the bacilli.

throughout the whole experiment at 37° C. owing to the delicate strength of all gonococcal cultures. This necessitated the whole being done in water baths kept at that temperature. The gonococcus was obtained in good fluid culture by using ascitic broth as a medium, and the dilutions made up with this medium.

TABLE A.

Germicide.	Strength.	Time of Exposure. 0	2½	5	7½	10	12½	15	20	30	60	Incubation Time.	Temp.
Pot. Permang.	1 in 500		+	+	+	+	+	/	+	−	−	48 hrs	37°
	1 in 1000		+	+	+	+	+	/	+	+	−	"	"
	1 in 2000		+	+	+	+	+	/	+	+	+	"	"
Control			+	+	+	+	+	/	+	+	+	"	"

Result. Pot. Permanganate 1 in 500 kills B. Coli in 30 mins
" 1 in 1000 " " " 60 mins

TABLE B.

Germicide.	Strength.	Time of Exposure. 0	2½	5	7½	10	12½	15	20	30	24 hrs	Incubation. Time.	Temp.
Chromic Acid	1 - 500		+	+	+	−	−	−	−	−	−		
	1-1000		+	+	+	+	+	+	+	−	−		
	1 - 3000		+	+	+	+	+	+	+	+	+		
	[illegible]		+	+	+	+	+	+	+	+	+		
Control			+	+	+	+	+	+	+	+	+		

Chromic Acid 1 − 10000 Kills B. Coli in [illegible] 30 mins
" " 1 − 5000 Kills B. Coli in [illegible] 10 mins

Again results show a strong balance in favour of the chromic solution, and although the estimations are not put forward as accurate absolutely, they should be reliable as a comparative test inasmuch as all physical conditions were maintained, the same for both, and the same strain of β. coli used for both.

An exactly similar pair of estimations was made with chromic acid, using a pure culture of gonococci obtained from an early infection of a male urethra. Slight difficulty was experienced in the estimation, since it was thought best to keep the temperature of all tubes

The growths in the broth tubes were all confirmed by subculturing on to blood agar and incubating for forty-eight hours.

TABLE C.

Chromic Acid.	Growth in Ascitic Broth 24 hours.	Subculture. Growth on Blood Agar.
1 in 2,000	−	−
1 in 4,000	−	−
1 in 6,000	−	−
1 in 8,000	−	−
Control (Chromic nil)	+	+

TABLE D.

Germicide. Chromic Acid.	Time of exposure in minutes. 2½	5	7½	10	12½	15	20	30	Incubation. Time.	Temp.
1 in 2,000	+	+	−	−	−	−	−	−	48 hrs.	37°C.
1 in 4,000	+	+	+	+	+	?	−	−		
Control ...	+	+	+	+	+	+	+	+		

RESULT—Chromic Acid kills gonococci :
1 in 2,000 in 7½ mins.
1 in 4,000 in 15–20 mins.

These two tables show a very vigorous germicidal power on the part of chromic acid towards the gonococcus, while the previous results indicate an improved power over that shown by permanganate.

Again, it must be stated that these small estimations, though made with reasonable care, do not pretend to be absolutely accurate, and are intended only to add a little weight of evidence to the claims of chromic acid solutions as an irrigating fluid.

No ill-effects, discomfort or pain have been found to follow the use of strengths up to 1 in 1,000, although higher dilutions were used in the early stages of irrigation of acute cases.

The indications, methods and general procedure have been followed exactly as with the usual permanganate irrigation, so that the details of time and condition of the cases can be briefly recorded below. All the cases are attending or have been attending the male Venereal Diseases Department.

CASE 1.—Age 29 years. Had previous infection six months ago, which was incompletely cured under treatment. Present infection one week's history.

Condition.—Anterior urethral infection with great tenderness. No scrotal pain. No glandular enlargement. March. 5th.—Mist. ol. santali and one anterior urethral injection protargol g. ii. ad. ʒi., anterior urethral irrigation with chromic acid 1 in 4,000 t.d.s. March 12th.—Ditto. March 21st.—No complications, discharge greatly diminished. Cromic acid 1 in 2,000 now used. April 9th.—No discharge. April 16th.—No discharge.

CASE 2.—Age 24. Draper's assistant. Infection January 1st.—Mist. hexamine. Epididymitis left side. January 25th.—Irrigation pot. perman. $\frac{1}{4000}$ t.d.s., Mist. copaibæ. February 5th.—No improvement. Left side improved, but epididymitis right side. Prostatic massage. March 5th.—Ordered posterior urethral irrigation following prostatic massage. Chromic acid $\frac{1}{4000}$. March 12th.—Left side scrotum normal, right side much better. March 19th.—Scrotum normal, very slight discharge. March 29th.—No discharge for four days, no gonococci on prostatic massage. April 19th.—No recurrence. Improvement dated from the use of chromic solution.

CASE 3.—Age 32. Invalided from navy for syphilis six years previously. Infective gonococcus six months' history. January 11th.—Pot. perman. $\frac{1}{3000}$, posterior urethra and prostatic massage up to February 22nd without result. Chronic discharge aggravated. Gonococci ++ in films taken. February 22nd.—5m gonoc. vaccine. Post-urethral irrigation t.d. Chromic $\frac{1}{4000}$. March 1st.—10m gonoc. vaccine. Ditto, $\frac{1}{4000}$. March 22nd.—20m gonoc. vaccine. Ditto, $\frac{1}{2000}$. April 5th.—50m gonoc. vaccine. Ditto, $\frac{1}{1000}$. April 12th.—50m gonoc. vaccine. Ditto, $\frac{1}{1000}$, discharge nil. April 26th.—50m gonoc. vaccine. Ditto, no discharge. Few pus cells and no gonococci in prostatic film. Improvement commenced with use of chromic solution and vaccine.

CASE 4.—Age 40. Labourer. Infection three months' history. Chronic morning discharge in spite of self-treatment with permanganate solution. Twice daily urethral irrigation practiced with chromic acid 1 in 3,000 for five days. After three days discharge ceased. No recurrence in twenty-one days.

CASE 5.—Age 27. Stevedore. Two weeks' history of infection. Had taken copaibæ. Copious discharge, gonococci ++. Anterior urethral infection. April 2nd.—Ol. santali, one protargol injection. Anterior irrigation t.d.s. Chromic $\frac{1}{4000}$. April 5th.—Irrigation continued. Improved. April 12th.—Irrigation continued. Very slight discharge. April 27th.—Irrigation continued. Very slight discharge.

CASE 6.—Age 32. Clerk. Infection eight weeks previously. Treated by irrigation, pot. perman. and ol. santali by mouth. March 22nd.—Posterior urethritis with morning discharge. Started on posterior urethral irrigation $\frac{1}{2000}$ chromic acid. April 5th.—Improved. April 12th.—No discharge for two days. April 19th.—No recurrence.

CASE 7.—Age 25. *5½ months' history.* Treated pot. permangate and ol. santali. No scrotal complications. Posterior urethritis, prostatic threads, morning discharge, gonococci ++. March 26th.—Posterior irrigation with chromic acid $\frac{1}{2000}$. Prostatic massage continued to April 16th with great improvement. April 23rd.—Discharge had ceased for three days.

CASE 8.—Age 21. Electrical engineer. Early four-day infection. Anterior urethra. Great pain. March 19th.—Mist. ol. santali. Gonococci ++. Protargol. March 23rd.—Anterior urethral irrigate $\frac{1}{2000}$ chromic acid. March 29th.—Improved. No posterior urethral complications. April 12th.—Slight discharge only. Irrigation still continued. April 23.—Discharge practically nil.

It would seem from these notes that chromic acid is capable of acting efficiently and in many cases distinctly better than the usual permanganate irrigation, particularly in the chronic cases with posterior urethral infection.

An apology is due for the rough way in which the matter is put down and for its vague incompleteness, but one feels that chromic

acid in dilute solutions might receive trials in other directions. A case in point: in the surgical wards a man with traumatic lesion of spine, loss of bladder control, severe cystitis (β. coli and strept. longus) and with pyrexia, was irrigated daily with chromic acid $\frac{1}{1000}$ and $\frac{1}{2000}$, very marked improvement in the cystitis and pyrexia being recorded since the commence ment of the chromic irrigation.

F. A. KNOTT.

Appointments.

The following appointments have been made :—

Staff-Surgeon F. G. Goble to the *St. Vincent* vice Beattie.

Surgeon Q. H. Richardson to the *Vivid*.

Temp. Surgeon M. Pearson, L.D.S., to the *Victory*.

R.A.M.C.

Temp. Colonel C. J. Symonds, C.B., M.D., F.R.C.S., Major R.A.M.C. (T.F.) reverts to the rank of Temp. Colonel on re-posting.

To be Temp. Major—R. O. Moon.

Temp. Lieuts. to be Temp. Captains—A. Walker, C. Weller.

To be Temp. Lieuts.—M. B. Taylor, A. H. Clough.

Officers relinquishing their commissions :—

Temp. Captains C. S. Pantin, W. C. McN. Dickey (on account of ill-health.)

2nd Lieut. G. H. Howe resigns his commission in order that he may resume his medical studies, and is granted the hon. rank of 2nd Lieut., dated April 3rd, 1917.

R.A.M.C. (Territorial).

Lieut.-Colonel (Temp. Colonel) J. Young relinquishes his temporary rank on vacating the appointment of Assistant Director of Medical Services.

Civil.

C. D. Outred, M.R.C.S., L.R.C.P., D.P.H., has been appointed Certifying Factory Surgeon for Gravesend, Kent.

Papers by Guy's Men.

Hildred Carlill, M.A., M.D. Cantab., M.R.C.P. Lond.: Korsakow's psychosis in association with malaria.—*Lancet*, April 28th, 1917.

Reginald Hayes, L.R.C.P., M.R.C.S. Eng.: Note on a case with severe gastric crises treated by Aachen methods.—*Ibid.*

The Restricted Supply of Food: its Relation to Health and Efficiency.

Lecture given before the Royal Sanitary Institute, April 25th, 1917, by M. S. Pembrey, M.A., M.D.

Printed by kind permission of the Committee of the Royal Sanitary Institute.

The relation of an inadequate supply of food to health and efficiency is not a new problem, for in the past it has constantly claimed the attention of the medical profession and social reformers. In this country the conditions have been supplied by the poverty of a limited class and the inefficiency of many mothers of all classes in the most important function of motherhood. Our slums and hospitals supply ample material for observation and numerous small graves in every churchyard throughout the country are at the same time eloquent evidence of the results of inadequate food and woman's failure in her first duty to the race.

The question is now more urgent because the public generally are involved and its attention is arrested, whether it will or not, by varying and often conflicting orders and advice. In the complex conditions of modern life we have been taught to neglect and distrust the dictates of instinct and need guidance upon the fundamental principles of nutrition.

Food, in the strict sense, relates to any substance which is taken into the digestive system and serves for the growth, maintenance, and repair of the body. The term cannot be restricted to those articles which yield energy on combustion, for water, salts, and other substances are necessary for life. The best types of perfect foods are represented by milk and eggs, for an infant flourishes and doubles its living substance if fed entirely on its mother's milk for six or seven months; an egg serves for the development and growth of the chick during the twenty-one days of incubation, and even for the subsequent day or two. A study

of the composition of these foods shows that the essentials are proteins, carbohydrates, fats, salts, water, and substances of unknown composition known as "vitamines." Proteins contain nitrogen, and are represented by meat, the casein of milk and cheese, and the gluten of corn; the carbohydrates in common use are starch and sugar; the so-called "vitamines" are found in most fresh and natural foods, such as milk, eggs, corn, and vegetables.

The food required by an individual varies according to so many factors, that it is impossible to give any dogmatic statement. Even in the case of a simple steam engine rough estimates only can be given of the probable amounts of fuel necessary for its efficient working at different speeds; trials and experience of its personal equation must be obtained. In the living body the problem is far more complex, and the important factors, age, sex, occupation and environment, will need consideration.

In a discussion upon this subject it is convenient to start from some definite point, whether it be the condition of an adult man doing no work and taking either no food or just sufficient to maintain his life. A man can fast for thirty to forty days without any fatal or very serious result, as the observations upon the professional fasting men have proved. Water they must have, and food they will obtain by living upon their own living substance. The material consumed by a fasting man corresponds to foodstuffs which would yield 1,500 to 2,000 Calories* per day. Combustion, therefore, is a characteristic of life, and in man only ceases with life itself. A man at rest in bed requires food with a fuel value of about 1,800 Calories per day to make good the daily loss, which is due to the "physiological work" of living. Even during the deepest sleep the body is always at work, the heart must continue to pump the blood, the muscles of the chest and abdomen contract in the process of breathing, and the glands elaborate their products.

The voluntary ration, 4 lbs. bread, $\frac{3}{4}$ lb. sugar, and $2\frac{1}{2}$ lbs. meat per head per week, yields about 1,200 Calories per day, and when allowance is made for women and children, is calculated to supply 2,000 Calories per man. It may, therefore, be considered as a maintenance diet, and, with the addition of other food, will form an adequate diet for a man doing light work.

It is now possible to consider briefly the quality and quantity of food required in relation to age, sex, occupation and environment.

Age.—An infant is a physiological unit and has its own special requirements; it would be a fatal error to estimate its needs at one-tenth of that of a man because its body weight is only one-tenth. It thrives best when it is treated like any other young animal and receives as much of its mother's milk as it cares to take. The value of this food expressed in Calories per day is about 400 for a young baby at the breast; in infants of 1—2 years of age it is about 1,050 Calories. The young child needs in proportion to its weight a far larger amount of food than does the adult, for it is rapidly growing, and owing to the larger surface of its body in relation to its mass, it must produce more heat in order to maintain the temperature of its body. As the healthy child grows older he becomes relatively more active than an adult and makes a further demand for food. The boy of 10—16 years of age often requires as much food as his father.

Sex.—Women require less food than men, for they perform less muscular work, but dur-

*The so-called "large Calorie" is the unit which represents the amount of heat required to raise the temperature of a litre of water (about $1\frac{3}{4}$ pint) from 15° to 16° C.

ing pregnancy and suckling the development of the offspring makes an extra demand upon the supply of food. The employment of women in hard manual labour cannot fail to increase their consumption of food as long as they are efficient.

Occupation.—The laws of nutrition hold good for all classes from the highest to the lowest. The various occupations, however, owing to the different outputs of energy involved make very different demands upon the food. The dietary which would be generous for a man or a horse doing no work would be slow starvation if he were forced to work hard each day. A system of rations, therefore, which pays no attention to occupation is absurd. In the following table of standards due to Atwater it will be seen that a man doing very hard work requires twice as much food as the man who does none.

	Protein in grms.	Fat in grms.	Carbohydrate in grms.	Calories Total.	Remarks.
Food supplied, free, seamen, Royal Navy	91	48	406	2585	Allowed also 4d. a day to buy extra food.
" " " boys " "	107	69	406	2745	
" consumed by seamen, Royal Navy	176	—	—	4080	Alcohol not included; no allowance for waste.
" supplied free to four British regiments	133	115	424	3369	—
British Army (South Africa, minimum)	138	105	528	3903	—
Russian Army (Manchuria)	187	27	775	4891	—
Japanese Army (Manchuria)	158	27	840	4343	—
United States of America Army (peace ration)	157	140	603	4179	—
Ordinary Prisoners, Scotland, light work mostly sedentary	135	35	536	3115	Food supplied.
Convicts, Scotland, "hard labour" so-called = moderate work	173	57	602	3707	" "
Convicts, England, "hard labour"	177	—	—	4161	" "
United States of America, members of two College football teams	225	334	633	6812	Food eaten.
United States of America, labourers at hard muscular work	177	—	—	6485	—
United States of America, very poor working people	69	—	—	2275	—
Japan, labourers	118	—	—	4415	Energy utilized.
China, "	91	—	—	3400	
Egypt,	112	—	—	2825	
Duke of York's Royal Military School (young men)	157	206	472	4514	—
Boys 9-14 years of age at English Public Schools	123	97	430	3400	—
Children over 8 years of age in London County Council Schools	88	66	377	2515	—

Condition as regards muscular work.	Calories required per day.
None	2,700
Light	3,000
Moderate	3,500
Hard	4,500
Very hard	5,500

Environment.—In cold weather more food is required for the maintenance of the heat of the body and the greater muscular activity which is a response to the stimulating action of cold. Animals and men inadequately fed quickly perish when they are exposed to severe cold.

Individual differences.—Apart from the foregoing factors, attention must be given to the personal equation of the individual. Some men work economically, others extravagantly; one man's food is another man's poison. Free choice of food makes for efficiency.

Standard Diets.—Reference has been made already to Atwater's standards for the food required by men, and it will be interesting to see what are the daily rations allowed for the navy, army, and institutions for the young and old in this and other countries.

These figures, collected from various sources, supply data which will serve as a basis for discussion. It is true that allowance cannot be made in all cases for waste, but against this must be set the increase due to the food which is bought. The figures for Japan and China show how erroneous is the popular idea that the inhabitants of these countries can live upon a handful of rice. There is no physiological reason for believing that different races have any fundamental differences in nutrition, when every allowance is made for external factors.

A system of rations may be necessary under certain conditions, but it is an uneconomical one and on physiological grounds is unsound. It allows little or no free choice of food and is not readily adjusted to the various factors which determine the need of different qualities or quantities of food. Likes and dislikes are expressions of physiological needs. Healthy men are animals, and when they work steadily and well, do not overfeed, even if they have free choice of abundant food. This is well shown by the fact that the average weight of the body remains very constant over long periods—it may be years—in the healthy and active adult, and likewise, as would be expected, the average consumption of food and the output of work.

The limitation of the system of rations is shown by the presence of dry canteens in the services, the numerous eating houses in garrisons and ports, the parcels from home and the "tuck" shops for school children. Rigid rations, if they are adequate for a large number of men, must lead to waste, for in no other way can allowance be made for various physiological needs.

Restricted Supply of Food.—The supply of food may be inadequate in quality, quantity, or in both. The foodstuffs which at the present time must be considered are wheat, meat, milk, sugar, and potatoes. A deficiency in one form of food may be covered by another article which is available. Substitution can by physiological processes be carried further than is possible by the chemist. In the living body, sugar and fat can be formed from starch in the food, and the reverse processes are also possible. As a general law, it may be stated that as sources of energy the foodstuffs can replace each other according to their values as producers of heat, thus the following are isodynamic quantities: 100 grms. fat, 232 starch, 234 cane sugar, and 243 dried meat.

Unconsciously this has long been recognised and experimentally it has been proved by the farmer and physiologist. When the cost of fat and meat is high, the working man with a small wage must buy more starchy foods; given an increase in wages, but no extra work, he will buy more meat and fat. One thing he must have is protein; he can substitute vegetable for animal protein, but he cannot form protein from starch and fat, for they contain no nitrogen.

Nutrition.—For a condition of health and efficiency the food should be more than enough to cover the outgoings in the form of heat and work; a balance upon the right side is useful for times of extra or special demand. This is especially the case in the young, for if this balance is not available, healthy growth is impossible. Unsuitable food, inadequate in quality or quantity, or both, is recognised as one of the chief causes of the terrible mortality of children. During the years 1911—1914 the deaths of children under 5 years of age in

England and Wales were 575,078. Not only may death be caused directly by digestive troubles, but the resistance to infective diseases is lowered by defective nutrition. The difference in the prospects of life of infants fed at the mother's breast and of those given artificial food is notorious. It is the duty of healthy mothers at all times to suckle their offspring, but never was the duty more imperative than now when there is a danger of a shortage of the best substitute, cow's milk, at a time when the infant mortality is high and the birth-rate exceedingly low. The mother can form the ideal food for the infant, not only without detriment, but with positive advantage to herself; moreover, she can form the milk from food which contains no milk, but she must be fed well. For children after weaning, a supply of cow's milk is necessary, for no longer is it the custom to suckle children of one or even two years of age, as was done in times past. How far the supply of milk is safeguarded will be considered later.

For school children and young adults there is no doubt whatever that safety lies in a generous diet. Underfeeding in animals and man is a greater danger than overfeeding. The vaunted benefits of a sparse diet are apparent only, not real. Most of the cases of obesity are due to insufficient muscular work, an inactive life; the man is no longer a free, healthy animal, but resembles the stall-fed ox, which fattens more readily because he does no work and is emasculated. Muscular work will strengthen the heart, lungs, and the whole system and will prevent the deposition of fat; a sparse diet will lessen the burden of fat, it is true, and will diminish the work of the heart, but it does not raise its efficiency above the average.

The effects of a restricted supply of food are increased directly an imperative demand is made for a great output of muscular work. There are points of resemblance and also of difference between man and a machine. No one expects to obtain work from a steam or petrol engine without a proportionate supply of fuel; the more work, the more fuel. There is always waste, and in respect of efficiency the engine is far behind the living body. The points of difference are enormous. The body is not only a transformer of energy, but effects its own repairs, becomes stronger with use, and even reproduces itself.

The widely-spread ignorance upon the question of the consumption of food appears to be due to the fact that many of the men and women who write or talk to the public are dwellers in cities who have never done continuous and hard muscular work. They do not recognise that the law of the conservation of energy applies to man. For national efficiency the man who does essential muscular work must have a greater amount of food than the sedentary worker, and it matters not what may be their respective wage. It is true that for a time man can work without an adequate supply of food, but it is inefficient work at the expense of his living substance; the result is always the same, discontent, less strength, less work, less resistance to disease and ill-health. All records of the effects of forced labour upon men and horses have proved this conclusively.

Regulation of the Supply of Food.—The ideal is a liberal supply of food with free choice. This may be impossible, and the question arises how is the supply to be regulated in the interests of the nation. The Government have wisely avoided thus far a compulsory ration, but have made attempts at control by fixed prices and other methods. The laws of nutrition will still be in force whatever this or any other Government may do, and wisdom would lie in the recognition of the supreme power of natural law. If one foodstuff is deficient a substitute can be found in others, owing to the

powers of adaptation of the body and its capacity of converting some forms of food into others. Moreover, the body as an engine can use different kinds of fuel. If coal fails, steam may be generated in the engines of a ship by oil, wood, or, in emergencies, even by burning parts of the ship itself. From this point of view the scarcity of wheat must be considered. Other corn can take the place of wheat, and should be used for this purpose. There is barley and malt used for the production of alcohol, an inefficient form of food at the best and a deadly poison in excess. According to the Food Controller there are 1,000,000 quarters of brewer's malt in this country at the present time; it is not to be used for food, but for the production of beer. The convictions for drunkenness in the Metropolitan Police district and the City for the first quarter of this year were 6,176. The Food Controller says that the food value of beer is not disputed and the Government does not consider that it is necessary to save the millions of quarters of barley, malt, and other foodstuffs which are to be used in the manufacture of alcohol. There may be reasons of policy for allowing alcohol to men in the services or employed in some essential occupations, but there is none for its wide-spread consumption.

Oats can be used as a substitute for wheat, but there is difficulty in obtaining a ready and cheap supply; the oats are being kept for the horses. A horse may consume 40 to 80 lbs. of oats per week, and hunters and race horses receive the best. Hunting and racing have been and are allowed; only now is the Government taking steps to consider whether savings in this respect should be effected in the interests of the food supply of the people. There are thousands of hunters, race horses, riding horses and carriage horses used only for pleasure in this country; the consumption of oats, maize, beans, hay, straw and carrots by these animals must be enormous. With the exception of the hay and straw, which would be useful for cows, all these tons of food could be used by man himself. The objection that the horses are needed as a reserve for breeding and for the Army has no force, for all these animals could be kept at grass, and under these conditions would liberate many men for essential work.

The percentage composition of those cereals is as follows:—

	Protein.	Fat.	Carbohydrate.	Full value per lb.
Wheat, Flour ...	8·3	1·0	73·5	1,615 Calories
Barley, Pearled...	6·6	1·0	76·1	1,630 „
Maize, Flour ...	5 8	1·2	76·3	1,625 „
Oat, Meal	13·4	6·6	65·2	1,795 „

All of these substances have been used even in times of peace as a substitute for wheat. In some respects oats are a better food than wheat, and the fuel value of one pound is greater than the total for one day of the voluntary ration suggested by the Food Controller. A horse eating daily 10 lbs. of oats consumes an amount of cereal food which would be sufficient to supply the needs of ten to twenty men.

Sugar and potatoes are foods which were introduced into this country in times relatively recent, and it is obvious that they are not so essential as some people imagine. The children should have the first claim on sugar, and they could also obtain milk sugar in milk and malt sugar in malt, besides those essential substances known as "vitamines."

The supply of milk is another difficulty and it has received the attention of the Government. A maximum price has been fixed for the retailer and the producer; the farmers have been selling their cows and giving up the production of milk notwithstanding the fact that it was a very lucrative business according to many writers to the daily press. For young children, invalids and our sick and wounded soldiers, milk is a food for which no efficient substitute

can be found. In the case of infants, if the mother cannot or will not suckle her infant, the practice of wet nurses should be revived.

During the spring and summer months there may be no serious shortage, for those are the best months, when the cows are at grass, the supply is large and feeding is cheap. There is a shortage at the present time, and the coming autumn and winter will show the effects of the reduction of the milking herds. Action, however, must be taken now. Heifers cannot be made into milch cows under ten months. The Government have revised their "milk orders," the farmers ask for the recall of those orders. In any case a reserve of cows could be provided by the end of next winter if the Government purchased at once numerous heifers and turned them out to graze with young bulls on land owned or taken over by the Government. Even if money were an object, the transaction would be probably a very profitable one. A supply of milk should be safeguarded and its cost should be low for the sake of the children, even if it be necessary for the State to give a subsidy.

If the scarcity of food is general the true remedy lies in an extension of the supply. Action has been taken at last, pasture has been ploughed up, but the highly fertile ground of the hop-gardens will apparently in many cases still grow hops for beer, instead of corn or potatoes for bread. The hop growers should have compensation if necessary, but food they should grow, for it is food which is needed.

Another source of food which is undeveloped is the salt and the fresh-water fish; but this, owing to the supply of cattle, is not so urgent as the question of cereals.

If the cost of food continues to rise, difficulties of a serious kind must occur, for a strong man is liable to become dangerous when he is hungry. A corresponding rise in wages does not meet every difficulty. The wage is not adjusted to the size of the bread-winner's family. A great relief and a true safeguard for the present and the future would be the free supply of dinner and tea to school children; the necessary machinery is simple, if the expense is a general one borne by the State. The health of the future generation could be secured, a great burden would be taken from many hard-working and deserving parents. Foodstuffs, which the labouring classes cannot obtain readily or cook properly, could be used in these free meals, and bread would be saved. There would be no danger that the children would be overfed, for even with active and growing children the law of averages as regards food would hold good.

Petty orders, such as the prohibition of Sunday School Treats and cakes, show no appreciation of the laws of nutrition, and cause an amount of irritation out of all proportion to the result obtained. The owner of poultry is not allowed corn for his fowl; the hen does not return in eggs and flesh the food value of the grain consumed; no animal ever did or ever will, for it must have some for its life. When allowance, however, is made for the consumption of refuse, the hen is economical. The owner of race-horses, hunters, and other horses used for pleasure, is allowed in unlimited quantities the very best oats, maize, and beans that he can buy; he takes the food from the mouths of the poor by outbidding them in the purchase of some of the best articles of food which are scarce at the present time.

Pass List.

Society of Apothecaries of London.

At the Examination held recently the following candidates were approved in the undermentioned subjects:—

Anatomy and Physiology.—K. J. H. Davies, A. McKenzie.

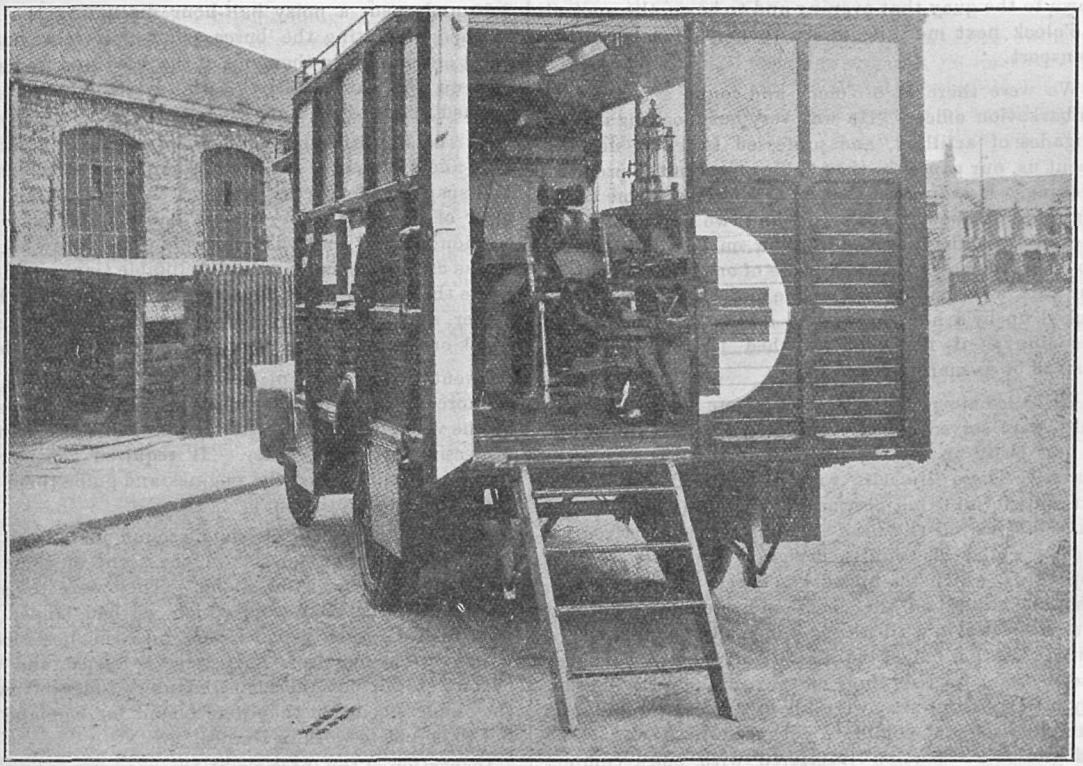
At the Final Examination held lately, W. H. A. Pratt was approved in Forensic Medicine.

With the French Red Cross Dental Ambulances.

BY AN OLD GUY'S MAN.

PART I.

To the casual observer they appeared to be the hybrid progeny of an Autobus and a Black Maria. They were imposing in dimensions and solid in construction, and were the outcome of much careful thought on the part of Mr. Parker-Cater, who was responsible for their design. The chassis were 20·30 Kelly Springfields and the bodies were built at the Million-Guiet works. In length they were about 18 feet over all, in breadth 7 feet, and their dead weight, loaded, was approximately 4½ tons.



The internal equipment, thanks to the generosity of many donors, was almost luxurious, and a glance at our drug department revealed the fact that our organizer had a cultivated taste in laxatives and anti-parasitics. Their exteriors were adorned with beautiful red crosses wherever one could be conveniently painted and the inscription "Croix rouge Française, Comitè de Londres Voiture de stomatologie." The latter word proved a stumbling-block to many people who imagined that we were specialists in abdominal surgery.

The personnel of each car consisted of two dental surgeons and a mechanic, and we were fortunate in finding two mechanics who were also expert chauffeurs and could undertake running repairs.

After numerous trial trips round the lanes of Hendon, the cars were pronounced to be ready, and on the 1st of July at 7 a.m. we started away, "under our own steam," for Southampton. Although 15 miles per hour was our official speed, we usually managed to improve on that. In fact, I remember on more than one occasion careering down hills at something approaching 50 miles an hour.

The smoothness of our departure was marred by a slight mishap to No. 2 car. On leaving the garage one of the folding doors of the extension flew open and flapped against a lamp-post, with the result that it was torn off. There was no time for repairs, and she had to proceed on her way with the battered remains of the door packed inside.

We arrived at Guildford about 9 o'clock without further incident, and after breakfast started on our road again. No. 2, in her snobbish desire to demonstrate the alleged superiority of her engine, forged ahead, and we did not see her again until we reached Southampton.

But as she invariably ran with her "cut out" open and giving a passable imitation of a machine gun in full blast, we were able to gauge her distance ahead by the degree of perturbation of certain military mule teams encountered on the road and later by the disorganisation of traffic in the narrow streets of Winchester.

Southampton was reached about 1.30. Here we were met by an official, who handed us a telegram dispatched by us from Guildford, announcing our probable arrival at a later hour and intended for Mr. Parker-Cater, who was making the journey by train. Our first endeavour was to get some information about the time and manner of our embarkation. So having garaged the cars we strolled down to the docks. After being passed on from one official to another, we ran to earth the embarkation officer. He was most affable, and having abstracted from us all our papers he instructed us to bring the cars down to the quay that evening and to be on the spot at 6 o'clock next morning to see them put on board the transport.

We were there at 6 o'clock and found a brand new embarkation officer. He was very busy loading up two brigades of artillery, and professed to know nothing about us, our papers or the affable officer of the previous evening. He admitted that he had received some vague instructions about three lorries and two chauffeurs, and these were all he intended to allow on board. Thanks, however, to the persuasive tongue of one of our members our cars were hauled out on the quay, where they were picked up by a huge crane and swung into the hold of the ship as if they had weighed 4½ pounds apiece instead of as many tons.

We sailed about 4.30 p.m., and before we cast off life-belts were served out to everyone with strict injuctions to put them on and keep them on until we reached Havre. These life-belts were of a weird and unpicturesque form. One portion fitted round the neck and stuck up behind the head in a manner suggestive of a Medici collar of cubist design. The rest of the apparatus, which resembled two large packets of dog-biscuits, rested on the chest and stomach and tied round the waist with a tape. It made one feel like a railway station collecting dog. Fortunately we never had occasion to test their efficacy in the water, but on dry land (or ship) they were about as comfortable as a straight waistcoat combined with a Chinese kang. The "dog-biscuit" portion interfered with one's comfort when sitting, and to get at one's cigarette case it was necessary to untie all the tapes; whilst the Medici attachment was a distinct failure as a pillow. We had good reason to know this before the voyage was over.

The ship was crowded with troops and officers, and there was not sleeping accommodation for more than half-a-dozen at the most. In consequence, those who could not find a rough and ready bed on the floor of the saloon had to spend the night on deck. We did the best we could with coils of rope and hatch covers, and some of us were fortunate in finding bales of fodder. In desperation one of the members of our party tried to find a resting-place in the bathroom, where everyone who passed fell over his feet; then in the alley-way between the cabins, where he was twice trodden on. After that he spent the remainder of the night in profane misery, seated on a steam pipe. We reached the port about 4 a.m., and after passing through innumerable lock gates we came to our berth an hour later.

The disembarkation of the troops, horses and guns started immediately, and as our cars were practically underneath everything else, we were sent ashore with instructions to return about mid-day. We did return at mid-day and found the ship still disgorging guns and horses, so we went into the town in search of something to eat. When we came back to the wharf the troops had disappeared; so had the donkeyman and his numerous assistants. They strolled leisurely back about 2.30 and spent a noisy half-hour discussing the best method of getting the 'buses ashore. Here we had no giant crane to whip them out of the hold and we had to rely on the ship's derrick, whose lifting power was limited to five tons.

At the first attempt, car No. 1 was lifted out of the hold and swung over the side. Then we discovered that the span of the derrick was not sufficient to land her clear of the ship's side. So we had another noisy discussion, and, as the donkeymen were all "braw scots," it was carried on in quite unintelligible Gaelic. Meanwhile the car was twisting about in mid-air like a huge spider, and we dreaded every minute to see the cable break or the heavy pump chair burst through the back.

Eventually the arm of the derrick was extended and reinforced with steel cables and the cars were deposited on the very edge of the quay, with the backs actually projecting over the water. It required considerable nerve and skill to start the engines and guide them over the raised edge of the quay.

At last we got them on solid ground just as the first fruits of the "big push," in the form of some 500 German prisoners, came along. They were to go to England in the boat from which we had landed and were rushed up the gangway and into the horse boxes with scant ceremony. They were a ragged and woe-begone crowd, but they cheered up considerably when they understood that they were bound for England and not to be put to work in France.

Inspection of the interiors of the cars showed that so well had they been packed not a single thing had moved from its place. Then we put our baggage "on board" and started for Yvetot, which was to be our first halt on our journey to Paris.

I was so sleepy after the previous night's experiences that twice I fell asleep and nearly rolled out of the cab. We arrived at Yvetot about 7 p.m., and put up at the Hotel des Victories. I don't remember if the beds were comfortable or otherwise. We were all in that stage of fatigue when a stack of barbed wire would have seemed a luxurious couch.

Next morning, after visiting the hospital in which one of our members had passed the previous nine months as honorary dental surgeon, we started on our way to Rouen, where we arrived about 1 o'clock, and having lunched and taken in petrol, took the road again for Vernon, the second stage on our journey.

Owing to the weight of our cars and their unfortunate habit of heating up, we were anxious to avoid the big hills, and to that end whenever we reached a village we sought out the most intelligent-looking inhabitant and enquired about gradients.

Our arrival was usually the signal for the gathering of all the population, who, when our questions were explained to them, proceeded to argue it out with some heat and and a lot of noise. Unfortunately their views never seemed to coincide except on one point, namely, that we were out for a hill-climbing contest, and we were invariably directed on our way by a route which presented the very steepest and longest hill in the country-side, up which we zig-zagged with the engines panting and the radiators boiling over. This always meant a half-hour's halt on the summit with the bonnets off to cool the engines.

On the whole the roads were very good, except the approaches to villages, where we clattered over the cobbles to the accompaniment of an infernal obligato from No. 2's "cut-out." I am sure that some of the inhabitants are quite convinced that they have seen the first "tanks" on their way to the front. Our next halt was at Vernon, where we stayed the night.

We started early next morning for the final lap of our journey, and following the Seine route through St. Germains, where we lunched, arrived in Paris by the Porte Maillot about 4 o'clock, and rolled majestically into the Place Vendôme, where we were to meet our delegate and receive instructions. Having garaged the buses at the Bastion near the entrance to the Bois de Boulogne, we returned to the Hotel d'Jena and engaged rooms.

According to our preconceived programme we did not expect to remain in Paris longer than ten days, and this expectation was nearly realised, but not in the way we anticipated, for on our first evening our delegate, Mons. C——, led off with the disconcerting announcement that the French authorities would be delighted to accept the cars and contents, but hesitated about accepting the services of the personnel, and that we must consider the possibility of having to return home within a few days. This was rather a facer, but having come so far we were determined not to give up without a fight, and Monsieur C—— promised to exert all his influence with the authorities to persuade them to accept us.

The only logical reason to which we could ascribe this sudden *volte face* on the part of the French authorities —who up to the time of our actual arrival in France had regarded our offer of service with favour—was that they had already some fifteen dental ambulances of similar design in the course of construction, and they proposed to man them with their own dental practitioners and mechanics withdrawn from the trenches. Under these circumstances I can well understand that we were regarded as interlopers.

Guy's Hospital Past and Present Nurses' League.

THE Sixteenth Annual Meeting of the Nurses' League, preceded by the Ninth Annual Dinner, was held in the Nurses' Home, on Friday, April 20th.

Only a small gathering could be expected owing to the number of past members engaged in war work at home and abroad, nearly 500 is the splendid total to date, and the difficulty and expense of travelling to those members living within reasonable distance.

There was, however, mutual pleasure in the re-union of all present, and with due respect to the wishes of Lord Devonport a friendly meal was enjoyed. Before grace was said, the Matron, Miss Hogg, informed her guests, that Miss Haughton (the late Matron) was staying at Ramsgate, and asked if it was their wish that a telegram of greeting should be sent to her. The suggestion was warmly welcomed and a wire was dispatched forthwith.

The Matron was supported by Miss Swift, Mrs. Andrews, Miss Rowell, Miss Blayney, Miss Studdert, and other friends.

The present Sisters presided at the other tables, and a contingent of Sisters from King George's Hospital, Stamford Street, made a touch of colour in their army uniform. Music, coffee, and conversation followed the dinner, and many remarked upon the great improvement made to the Nurses' dining-hall by the addition of the large bow window and the extra accommodation thus afforded.

The Annual Meeting was held in the large sitting-room at 8 o'clock. The Chair was taken by Miss Sheldon, who in opening the meeting regretted the enforced absence of many members, and asked permission, before proceeding with the routine business, to introduce two special points.

The first was in the name of all Past and Present Members of the League, absent and at the meeting, to give a special welcome to Miss Hogg as Matron of Guy's Hospital and Hon. Sec. of the League, and to wish her happiness and success. Miss Sheldon spoke of the feeling of sadness that is always present in taking over the work of another, and said she felt sure that the really tragic cause of Miss Haughton's resignation must have caused Miss Hogg great anxiety and pain. Miss

Haughton's last wish, however, would be that her illness should cast a shadow upon her successor, and she would be the first to join in their congratulations to Miss Hogg and support and co-operation in maintaining the best traditions of the Hospital. The Chairman then remarked, that in spite of her numerous engagements as Matron-in-Chief of the Trained Nurses' Department of the Joint War Committee, Miss Swift was present to join in the general welcome to Miss Hogg, one of her own pupils, and as Miss Haughton's immediate predecessor in the Matronship of the Hospital, to propose a vote of thanks to Miss Haughton for her work for the the League, and to express on behalf of all present their deep sympathy with Miss Haughton in her enforced retirement.

Miss Sheldon then called upon Miss Swift, who was warmly received on rising to speak. She mentioned most sympathetically Miss Haughton's illness and the inexpressible loss the Hospital had sustained. Miss Haughton had always worked upon broad lines regarding the training of nurses and the scope and objects of the League. Her present work, Miss Swift stated, would lead her more than ever to emphasize the duty of all nurses to take full advantage of their professional training and opportunities, and in every way to widen their knowledge of human nature and the world around them. Following this line of thought, it was natural that later Miss Swift should speak of the College of Nursing—an outcome of war conditions—the establishment of which promises organisation and educational efficiency to the profession. Miss Swift begged all nurses to interest themselves in the College and to study its constitution. We are proud to think that both Miss Swift and Miss Haughton have devoted their powers and experience to the founding of this College.

Mrs. Pooleman was asked to second the vote of thanks to and sympathy with Miss Haughton. As one of the oldest members of the League, Mrs. Pooleman said she valued this privilege. She had trained under Miss Victoria Jones, now many years ago, but had always found on visiting the Hospital a welcome and interest from each successive matron.

Miss Hogg was then very cordially received, and said that as Matron it was a great pleasure to her to welcome the members of the League, and, as expressed by Miss Swift and Miss Sheldon, she thanked them all for their good wishes, and then read the report of the year's work, and in the absence of Mrs. Cameron, the hon. treasurer, presented the audited balance sheet. Between eighty and ninety members have been transferred to the past members' section during the year. The Cottage at Honour Oak had been well used, as also have the tennis court and swimming bath. The war had curtailed the activities of the other societies, and it was not found expedient to hold a competitive exhibition of photographs. The names were read of the Guy' nurses who have received the Royal Red Cross since the last Annual Meeting. During the war 11 have received the 1st class and 19 the 2nd class Royal Red Cross, and 27 have been mentioned in despatches. These names have duly appeared in the GAZETTES of various dates.

In December the eighth edition of the "Nursing Guide and Register of Nurses Trained at Guy's Hospital" was published, and a copy sent to each member. As so many members were abroad, the Matron feared there were numerous inaccuracies, and asked for corrections and for up-to-date information as to members' appointments and addresses.

Thanks to Mrs. Cameron's good work, following upon that of Mrs. Fagge, the financial state of the League is satisfactory in spite of the heavy expense of printing the Nursing Guide,

The meeting then confirmed the election of three hon. members of Council—Lady Lane, Mrs. Fawcett, and Mrs. Bromley. Miss C ulton, the Assistant Matron, proposed a vote of thanks to the retiring members of Council—the Countess of Bective, Mrs. Hale White and Mrs. Craig—and spoke of their great interest in and support of the Nurses' League. This was seconded by Sister Mary, Miss Edmonds.

The meeting was brought to a close by an ever-popular vote of thanks, carried by acclamation, to Miss Smith for her indefatigable work as Secretary of the League. As the Chairman remarked, she believed Miss Smith had the name and address of every League member engraved upon her heart and mind, and the least that could be done to help her in the work was to supply her with the correct ones.

Miss Smith, in reply, spoke of the great pleasure it had been to work for Miss Swift and Miss Haughton, and all that they had done for the League and its members. Just before her illness Miss Haughton had gone through the proof sheets of the new Register, and one of her first questions as she began to improve was whether arrangements had been made to send the small Christmas gift to members working in hospitals abroad. Miss Haughton had chosen the calendar and the photograph, and the two previous years had herself packed and addressed the League present, and had been cheered and delighted by the many letters of thanks and appreciation she had received.

Excellent music followed, by members of the Nursing Staff, and a small collection of photographs were admired. They had been arranged by Miss Smith and Sister Mary, and included some lent by the Royal Photographic Society.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette" Guy's Hospital, London, S.E.*

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Le Faux Miroir. Reflections from the Urgency Cases Hospital. Price 2s. 6d., from the Secretary, Urgency Cases Hospital, 37, Queen's Gate, S.W.

This book is the production of the staff, both French and English, and of the patients of the Urgency Cases Hospital, which went out to France as long ago as March, 1915, to help the French Red Cross. When first in France the hospital was stationed in Bar-le-Duc, but in August, 1915, it was moved to the Chateau of Faux Miroir near Revigny on the Verdun Front. Among the surgical staff of the hospital was Mr. W. H. Ogilvie, who was well known as a resident at Guy's at the outbreak of war.

The book contains a number of photographs and many excellent sketches of ruined French villages in the neighbourhood of Verdun. During the six months of the battle of Verdun the hospital was full to overflowing with urgent cases direct from the battlefield. Though situated some miles from the front there was no lack of work or excitement. The destruction of a Zeppelin took place not far from Faux Miroir in February, 1916, and is well described in an article entitled LZ 77. There are many stories and poems dealing with matters of local and general interest, and we have no hesitation in saying that the Hospital has good reason to be proud of the production of so interesting and able a record of its work.

Revue de Chimiothérapie et de Médecine Générale. We have received a copy of the first issue of this new journal, which is edited by Dr. J. Laumonier and is to appear once every two months during the war, and subsequently monthly. The object of the journal is to spread knowledge of Chemiotherapy among French medical men. Besides original matter it will contain summaries of the principal papers published in France or other countries. The first number contains a long article on Colloidal Iodine and two shorter ones on the Chemiotherapy of Tuberculosis and Antitetanic Serum Treatment. The whole publication is in French and is published at 2, Rue de Rivoli, Paris.

Studies in Malaria. By Hugh Stott, M.B., B.S. Lond., Captain I.M.S. Published by Thacker, Spink & Co., Calcutta. Price, Rs 7/8.

This interesting account of the progress and prevention of an epidemic of malaria in Mandalay is a collection of papers which appeared in the *Indian Medical Gazette* during 1914–15, and is put into book form in five parts, namely:—

1. An enquiry into the malarial admission rate amongst the five population groups living within the walls of Fort Dufferin, Mandalay.

2. An enquiry into the results of twelve months' supervised issue of prophylactic quinine to one half of a regiment, the remaining half acting as a control.

3. Notes of the relative value of clinical observations in malaria.

4. Notes on the therapeutic value of Oral Quinine, Injected Quinine and Salvarsan.

5. Further experiences of malaria contracted in Madras and among men invalided from the Indian Expeditionary Forces in British East Africa, the Persian Gulf, Mesopotamia, Egypt, Gallipoli Peninsular and France.

The book is lavishly illustrated by photographs, plans, charts and diagrams, even in parts up to a degree of confusion. However, to those specially interested in the disease and having some practical experience of its manifestations the little volume is of great interest and value, but we would not recommend it as an introduction to the study of a nowadays much discussed group of diseases.

A Handbook of Midwifery. By Comyns Berkeley, M.A., M.D., M.C. Cantab., F.R.C.P. Lond. Published by Cassell & Co., London. Price 6s. net.

The latest edition of Dr. Comyns Berkeley's Handbook of midwifery is complete and up-to-date. Under the new regulations of the Central Midwives' Board, the syllabus of the subjects of examination for pupil midwives is enlarged—and the standard of work, both in theory and practise, is raised.

The book meets these requirements of the Central Midwives' Board, and deals with the subjects in a clear concise manner.

Nowadays, when the lay public are asking to be enlightened on the subject of twilight sleep, and why it is not more generally used by the medical profession, the appendix on the subject is both interesting and useful to midwives and maternity nurses.

The book deserves to be widely read by obstetric dressers and externs, since they are the obstetricians of the future, and there are many points that should prove useful in private practise.

A Short Practice of Gynæcology for Medical Students. By Henry Jellett, M.D. Dublin, F.R.C.P. I. Published by J. & A. Churchill, London. Price, 15s. net.

This book is a shortened and simplified edition of a larger work by the same author. It is primarily intended for students reading for examinations. The earlier chapters dealing with menstruation, the bladder, urethra, vulva and vagina are hardly full enough, and the classification adopted is not very good. The chapters dealing with the more important gynæcological conditions are exceedingly good, whether for student or practitioner.

As is usual in gynæcological text-books a section at the end is devoted to the technique of operations. In

this book the descriptions are lucid and exact and should prove, we think, extremely useful.

The book is well illustrated with 316 drawings in the text and 10 coloured plates. These are exceptionally clear throughout the book, and compare very favourably with those found in other text-books.

Although we would not recommend the book as an exhaustive treatise on gynæcology, it admirably fulfils the requirements for students, for whose use it is intended,

Common Diseases of the Male Urethra. By Frank Kidd, M.B., B.C., F.R.C.S. Longmans, Green & Co. Price, 5s. net.

This excellent little volume comprises a series of lectures delivered by the author when it became clear that special venereal clinics were to be started in 1917 under the direction of the various County Councils.

They are primarily intended to serve as a guide to practitioners in touch with modern lines of the treatment of urethritis, and the whole subject is treated in the clearest possible way, the author always placing the clinical pictures and indications before the reader instead of the usual method of giving the laboratory indications the complete preference.

The reading is pleasant and easy, whilst the diagrams and chapter on clinical pathology are excellent.

Honours.

Mentioned in Despatches.

R. H. Jocelyn Swan, M.S. Lond., F.R.C.S., Major RAMC.

Foreign Decorations.

BY THE SULTAN OF EGYPT.—ORDER OF THE NILE, 3RD CLASS.

Major R. G. Anderson, R.A.M.C,, late Assistant Adjutant-General, Recruiting Department, Egyptian Army.

Notices.

A service will be held in Westminster Abbey for members of the University of London on Presentation Day, Wednesday, May 9th, at 6 p.m. The Rt. Rev. the Bishop of Kingston-on-Thames will preach.

Applications for tickets admitting to the reserved space in the Abbey should be sent to Hon. Secretary, Westminster Abbey Service Committee, 88, Gower Street, W.C. 1.

Guy's Hospital Christian Union.

It is proposed to hold discussions on the following subjects. Mr. R. Rees, of the Students' Christian Movement, will introduce them. The meetings are not restricted to members of the Union. All Guy's men are heartily invited to attend and take part in the discussion.

May 8th.—"Damaged Goods."

May 22nd.—"Are Churches and Parsons any use?"

May 29th.—"'Raymond,' Sir Oliver Lodge, and the Future."

The meetings will be held in the College Reading Room at 4 p.m.

The following lectures will be given at the Royal Institute of Public Health, 37, Russell Square, W.C. :—

On Wednesday, May 9th, at 4 p.m., Major F. W. Mott, M.D., F.R.S., F.R.C.P., on "The Pathology of Venereal Disease." Chairman, the Rt. Hon. the Earl of Ancaster.

On Wednesday, May 16th, at 4 p.m., the Rt, Hon. Lord D'Abernon on "Public Health and the Control of the Liquor Traffic." Chairman, the Rt. Hon. John Hodge, M.P.

Books Received.

Pocket Anatomicat Atlas of the Human Body. Published by The Scientific Press, 28, Southampton Street, London. Price 1s, 3d. net.

This little book contains twelve diagrams of the human body. showing the bones, muscles, vessels and viscera. It might prove useful for revision purposes.

The Expectant Mother. By C. L. Norman. Price 2d. Published by the Scientific Press, London.

The Nursing Times, St. Mary's Hospital Gazette, The Hospital, The Hospital Gazette, St. Bartholomew's Hospital Journal, Revista Odontologico (Buenos Aires), Polyclinic, The St. Thomas's Hospital Gazette, The Prescriber, The Samaritan Magazine, Magazine of the London (Royal Free Hospital) School of Medicine for Women.

Birth.

ERULCAR.—On the 25th March, at Saraswati Villa, Gamdevi, Bombay, India, the wife of A. S. Erulcar, M.D., B.S., of a son.

Marriage.

CRAWFORD—JACKSON.—On April 17th, at Cloves Parish Church, Vincent James Crawford, D.S.O., Lieut.-Colonel R.A.M.C., to Ellen Kathleen (Eileen), eldest daughter of the late Samuel K. Jackson and Mrs. Jackson, Cara-Cloves, Co. Monaghan.

Deaths.

BOWDEN.—On April 20th, at Sunningdale, Reigate, George Henry Bowden, L.D.S., R.C.S. Eng., F.P.S. Glasg., aged 54, the dearly loved husband of Ada Crouch Bowden.

BROGDEN.—Lieut. Ingram, R.R., R.A.M.C., B.A. Cantab., M.R.C.S., L.R.C.P., missing, believed drowned, April 15th, only son of R. W. Brogden, M.B., B.S. Lond., and Mrs. Brogden, 12, Tower Road, Ipswich, aged 24.

SNELL.—Killed in action, on April 9th, Herbert Snell, L.D.S., 2nd Lieut. London Scottish Regiment, aged 36.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

A REMARKABLE letter illustrating War Office methods appeared in the *Times* (May 12) from the pen of Dr. Howard Marshall, who is Civil Medical Officer to the Cirencester Voluntary Aid Hospital. The writer complains that the War Office has and still is exploiting the medical profession. At the outbreak of war numerous Voluntary Aid Hospitals were established all over the country. No arrangements were made for the remuneration of the civil practitioners who attended there, and, indeed, at first no remuneration was expected. But when it was realised that the war was not a matter of months, but of years, and when the withdrawal of doctors for the R.A.M.C. increased the work for civilian practitioners, it was felt that some payments ought to be made for the services previously rendered free at Voluntary Hospitals.

As long ago as June, 1915, it appears that the War Office authorised the payment on application of certain fees to civilian medical officers; the scale of payment was 3d. per occupied bed per diem for hospitals receiving cases direct from overseas, and 2d. per diem for transfer hospitals. Yet, in spite of the fact that such payment was extremely moderate, the fact that it was obtainable was concealed from medical officers under War Office instructions. It was only when those who had earned it pressed for payment that the money was forthcoming, and a War Office letter expressly stated that the fact that payment had been authorised was "confidential and not to be made known to hospitals." In the opinion of the writer of the letter the action of the War Office was a dishonest attempt to exploit the services of civil practitioners.

Since the outbreak of war it cannot be said that the profession, as a whole, has been making war profits, at any rate, not on anything like the scale on which they have been made by many branches of the civil community. Nor for a moment would any member of the profession wish to profit out of the war. Many thousands of men have left good and profitable private practices for the drudgery and comparatively small pay of the R.A.M.C. It is true that for a considerable period men just qualified were able to earn 24s. a day as temporary officers in the R.A.M.C. This was, of course, more than most of them would have earned so soon after qualification in peace time, but the comparative liberality of the pay is more than counterbalanced by the lack of useful experience in the R.A.M.C., at any rate, as far as medical and surgical experience is concerned.

If the War Office decides to use civilians for the treatment of wounded and sick in Voluntary Hospitals two courses are open to them. They may appeal to the patriotism of practitioners and invite their attendance gratuitously, or they may authorise a payment and publish the scale of fees. But the line which they have taken up of only paying those whose demands become importunate and of concealing the fact that any pay is authorised from everyone else cannot appeal to any fair-minded man as an honest or straightforward arrangement.

WE regret to hear that Mr. Bromley has given up his Hospital work in view of his early departure to an Eastern front as a surgical specialist. All Guy's men will join us in wishing him every success and a speedy return to Guy's. His work is being divided up among other members of the Staff. As Dean of the Medical School he is replaced by Sir Cooper Perry and Dr. Pembrey, while Temporary Surgeon Marston, R.N., is undertaking the duties of the Warden of the College.

In order to help with surgical emergency work Mr. Thompson has come to live in the Hospital, and is occupying the Resident Surgical Officer's rooms. He has very kindly offered to give his advice in any case in which House Officers are in need of a second opinion, and we feel sure that the Residents will take full advantage of his services.

At present the question of whether any more members of the Staff are to go into the R.A.M.C. does not appear to be decided, but we are glad to hear that the invaluable teaching work done by Dr. Mutch as Registrar is to remain available for students for at any rate three months more.

THERE are now a considerable number of students back at the Hospital who have been away on service in various combatant units. Those who have been allowed to relinquish their commissions to take up their medical work again are entitled to a gratuity on discharge. We believe that in some cases this has not been obtained. If a first application to the War Office does not produce any satisfactory result, payment of what is due may sometimes be obtained by continued and importunate demands.

WE have received up to date £18 14s. 0d. towards the cost of the hand ambulance for use on the District. We understand that this sum is about all that is required, and wish to express our thanks to those who have so generously sent us subscriptions.

THE strike of omnibus employees has made the Hospital more difficult of access than usual, but as we still have the use of the tubes and Hop Exchange trams, the situation is not really serious. If, however, as threatened, the strike extends to the workers on the tubes and trams, there would be some difficulties in going "up west" for men resident in the Hospital.

WE have much pleasure in congratulating Dr. E. P. Poulton on being elected a Fellow of the Royal College of Physicians.

WE are glad to see Mr. G. E. Genge-Andrews has completely recovered from the illness which necessitated his giving up his appointment in the Genito-Urinary Department. Unfortunately he is not able to take up his work here again owing to medical advice.

RECENTLY several old Guy's men have been seen at the Hospital when on leave from their naval or military duties. Capt. O. G. Morgan is on leave from the Milicent Sutherland Ambulance where he is in charge. He tells us

Lieut. I. R. R. BROGDEN, R.A.M.C.

(Reported Missing, believed Drowned, April, 1917.)

that the Ambulance is dealing with practically nothing but compound fractures and infected joints and is obtaining extremely good results by the application of the Carrel method of treatment, which was described in recent issues of the GAZETTE.

Lieut. R. Curle is also in England, having been invalided from Salonica suffering from trench fever. We hope that he will soon be well enough to be given employment in some sphere where his surgical experience may be of value.

Surgeon H. Gould has also visited the Hospital after a protracted absence on active service in the navy in various parts of the world.

A CORRESPONDENT sends us the following extraordinary request which reached him recently:—

"Dear Sir,—I learn from Mrs. R—— that you cut your Water Bed in half. May I ask if you would sell me one half of it for an invalid, or if not, would you lend it on hire?—Yours faithfully,
E. B——."

ANOTHER correspondent has sent us the following true story:—

A QUESTION OF FEE.

"A well-known London anæsthetist was called upon one Sunday morning by two servant girls, lately arrived from the country. On going into his consulting room the patient said, 'Please, sir, I want you to pull out my tooth.' He was very amused, and informed the girl that he did not draw teeth, but seeing her in evident pain and noticing her swollen face, he thought he would do the kind thing for her. He, therefore, rang up a neighbouring dentist in Harley Street, and told him he would bring the girl along. The anæsthetist administered the gas and the tooth was duly extracted. The question of fee then arose, and it was decided to charge the patient half-a-crown. She was indignant at this, and told them that her doctor in the country never charged more than a shilling."

Publications received.

The Polyclinic, The Prescriber, The New York State Journal of Medicine, The Samaritan Magazine, The Hospital.

Obituary.

Lieut. I. R. R. BROGDEN, R.A.M.C.

It was with great regret that all his friends heard that Lieut. I. R .R. Brogden was reported by the War Office as "missing, believed drowned," on April 15th. He had been in the R.A.M.C. for some six weeks only and was on his way to Egypt.

Lieut. Brogden was 24 years of age and was educated at Marlborough, Clare College, Cambridge, and Guy's. He entered the wards here in January, 1914, and, after doing the usual ward appointments, was appointed Out-Patient Officer and later House-Surgeon to Mr. Dunn. On completing the latter appointment he entered the R.A.M.C., and as he was passed fit for garrison service abroad was being sent to Egypt when he met his death. No details have up to the present been heard, but it is thought that he was probably lost on the *Arcadian*.

Though never a prominent figure in athletics owing to an attack of rheumatic fever Lieut. Brogden was one of the best known and most popular men at Guy's. His invariable cheerfulness and good temper made him universally liked and respected by everyone who met him both in his earlier days as a student and later as House-Surgeon. In the latter capacity he showed that he possessed a very sound surgical judgment and considerable skill in surgical technique. Though often not in the best of health he stuck to his work, and it was only with the greatest difficulty that he could be persuaded to take a rest even when he most obviously needed it. In his long career here we doubt if anyone has ever been found to say a word against him, a record not attained by many who have passed three years at the Hospital.

He was an only son of an old Guy's man, and we wish to express our deepest sympathy

with his parents in their irreparable loss. Though his promising career has been cut short in so tragic a manner, his friends will always retain pleasant memories of their associations with him.

G. W. DANIELL. M.R.C.S., L.S.A.

Mr. G. Williamson Daniell, of Dale House, Blandford, died on January 31st, 1917. He was educated at Guy's Hospital, where he qualified in 1856 and occupied the post of House-Surgeon in 1857. He was one of the best-known medical men in Dorset, having been elected Mayor of Blandford in 1869. For many years he served with the Dorset Yeomanry and was a fine horseman. As a magistrate and in other public capacities he did a great deal of hard and useful work.

Surgeon-Major A. H. PALMER, R.A.M.C. (T.F.)

Surgeon-Major Ambrose Henry Palmer, R.A.M.C.(T.F.), died at Cairo on May 2nd of wounds received on April 17th, aged 47. He was the eldest son of Dr. Palmer, of Barton-under-Needwood, Burton-on-Trent, and was educated at the Birmingham Medical School and at Guy's Hospital. After taking the diplomas of M.R.C.S., L.R.C.P.Lond., and L.S.A. in 1895 he went into practice at Barton-under-Needwood, where he was Medical Officer and Public Vaccinator of Barton District, surgeon to the Barton Cottage Hospital, and surgeon to the post office. He joined the Staffordshire Yeomanry on December 24th, 1904, became surgeon-captain on June 24th, 1908, and was promoted to surgeon-major last year.

Hand Ambulance Fund.

The following further subscriptions have been received:—

"H. H. E."	£5	0	0
Mrs. Ballard	0	2	0

Total subscriptions to date—£18 14s.

Leaves from a Surgical Note Book.

The Diagnosis and Treatment of Injuries of the Bladder.

Injuries to the bladder are due, as a rule, to violence applied to that organ, usually when it is over-distended. The bladder may be ruptured by blows from without, *e.g.*, wounds or crushes in the hypogastrium, or it may be perforated by spicules of bone in fractures of the pelvis or in penetrating wounds of the lower abdomen. It may also be ruptured from within by over-distension in washing out the bladder or by rough use of a catheter or lithotrite, especially if the bladder wall is weakened by chronic distension or inflammatory softening. For instance, cases have occurred where a sacculus of the bladder containing a stone was perforated during lithotrity. Spontaneous rupture due to over-distension is uncommon, as in strictures of the urethra the dilated urethra gives way more often than the bladder. If the bladder gives way, sacculation and ulceration are present.

Rupture may be intraperitoneal when the injury involves the upper or posterior part. or it may be extraperitoneal when the lower surface is involved. Aseptic urine is but slightly irritating, and if removed within a few hours the damaged parts heal well. If left for more than twenty-four hours the irritation lowers the vitality of the tissues and they fall a prey to infection by pathogenic organisms from the intestine or elsewhere with resulting peritonitis or pelvic cellulitis according to the position of rupture. If, however, cystitis is present infection occurs much more rapidly. In any case rupture of the bladder is a serious accident and needs early diagnosis and prompt treatment.

Signs and symptoms.—There will be a history of injury to the pelvis or lower abdomen or a punctured wound in this region. The patient usually had a full bladder at the time of the accident. Some degree of shock is present with hypogastric pain, and often there is a desire to micturate, but nothing is passed except a little blood. When an over-distended bladder ruptures apart from injury there is an increasing desire to micturate which suddenly passes off at the time of rupture and returns gradually as inflammation sets in.

On examination, shifting dulness is found in the loins in cases of intraperitoneal rupture. In extraperitoneal rupture a fixed swelling increasing in size is found on one side above Poupart's ligament. In all cases presenting such signs or symptoms or after severe injuries to the pelvis the patient should be asked to pass urine. If he cannot do so, or if blood is present, a catheter is passed. If the urine is blood stained or small in amount, an anæsthetic should be given, and 8 or 10 oz. of saline are injected into the bladder which is then emptied again. If the amount returned is much diminished there is probably rupture of the bladder, while shifting dulness may be made more obvious. Another method of investigation has been advised. Air is injected through a catheter, and if the bladder is ruptured intraperitoneally the liver dulness is diminished, while in extraperitoneal rupture there may be surgical emphysema of the lower abdomen and perineum. Severe shock may be caused by the injection of air into the peritoneum, and the procedure is undesirable.

Treatment.—Immediate operation is required. After 24 hours the prognosis is grave. A paramedian incision is made above the pubes and the peritoneum is opened, as it is seldom certain that the peritoneal surface is not involved. If this proves to be uninjured, close the peritoneum; if ruptured, pack off the intestines and sponge away all free urine and place the patient in the Trendelenberg position. The rent in the bladder is then closed with two rows of sutures, the inner one a continuous catgut through all layers, the outer one a continuous Lembert suture of fine silk for the peritoneal coat only.

A large catheter is passed into the bladder and retained in position for seven to ten days. Unless obvious sepsis is present there is no need to drain the prevesical space, and the abdomen is completely closed.

If the rupture is extraperitoneal, close the peritoneum and push it up out of the way. The front and sides of the bladder are explored through the prevesical space, and, if necessary, the bladder is opened and examined from the inside. When the rent is found it is closed if possible, the prevesical space is drained, and a catheter tied in as above. If it is impossible to suture the rent owing to its depth, a large tube is placed down to the rent to prevent extravasation into the prevesical tissues. This tube is irrigated daily and is left in place for five days. It is then withdrawn and a track is formed which will close like a suprapubic cystotomy. In cases of fractured pelvis fragments of bone are removed or levered into better position.

The bladder has been injured during a laparotomy or in operations for hernia. If there is any doubt about the position of the bladder a sound may be passed. If injury is suspected after an operation, the cystoscope may be used.

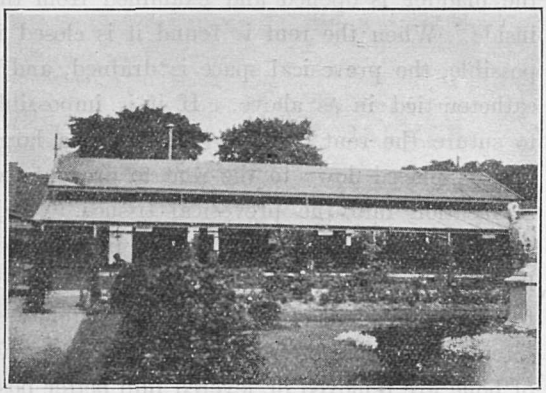
Foreign bodies may cause injury, such as pipe stems, or hairpins. Such foreign bodies cause no symptoms for a time, but later cystitis develops and they become covered with phosphates, causing frequency of micturition and hæmaturia. The treatment for such cases is to cystoscope and remove either by lithotrite if possible, or by suprapubic cystotomy and drainage. W. E. T.

With the French Red Cross Dental Ambulances.

BY AN OLD GUY'S MAN.

PART II.

DURING our long and wearisome wait in Paris our nominal headquarters was known as Bastion 55. This place, which is really a depôt of the French Red Cross, is situated under the fortifications near the entrance to the Bois de Boulogne, and consists of a number of large "barraques" where the gifts to the allied Red Cross institutions are received, sorted out, and dispatched to the various hospitals. In the centre the offices, etc., form a hollow square around a charming little garden, most artistically laid out, as is usual in all French cantonnements. At the back of this is a large open garage with ground space for about twenty big lorries, and it was here that our cars were installed. The other buildings



comprised sleeping quarters and mess for the men, kitchens, a barber's shop, shower baths and the officers' mess. The latter boasted a latticed annexe, furnished with tables and chairs, where we took our dejeuner. At the risk of being accused of "gourmandise" I must confess that we looked forward to these *al fresco* meals as the event of the day. And we were not surprised to find that the corporal cook who daily created gastronomic miracles, was in civil life the chef of the Prince de C——. His stipend in the French Army amounted to eight sous a day; but he was very jealous of his professional reputation.

It was the same thing with the simple soldier who condescended to cut our hair. In times of peace he was the principal artist in a luxurious hairdressing establishment on the Riviera. I once gave him a small razor-stropping novelty, valued at one shilling. He was delighted with it, and before our departure he insisted on presenting me with a bottle of eau de Cologne, which must have cost at least eight francs. That is the worst, or best, of the French Army. The grimy gentleman who crawls about under your car scraping grease off the gear box will usually turn out to be a scion of one of the noblest French families.

Under other circumstances our stay in Paris would have been a delightful holiday, but we were impatient to be at work. We were told that we might expect an official visit from the chief of the French Army Medical Service, who wished to inspect the cars, and as no definite date had been fixed we were expected to be in attendance at the Bastion every day. The weather was appallingly hot, and we had nothing to occupy our time with except writing letters and wondering when we should receive official approbation and be packed off to the front. But we received many unofficial visits, chiefly from people interested in similar ventures. Perhaps the most interesting of these was Dr. Gamnerez, who had already had several months' experience at the front in command of the first experimental dental van sent out by the French Medical Service. He gave us some interesting details and figures which, later on, were very useful to us, and invited us to visit the Avenue Bergrand, where the French cars were being completed. They were smaller and less solid than ours, very similar in design, though perhaps not so elaborately equipped. But they had many little ingenious devices such as the miniature railway lines which enabled them to slide the pump chair out on to the extension, and when closed, kept the chair immovable whilst travelling. We made a note of this and other things which might prove useful in future cars.

The French returned the compliment by copying our luggage nets, sleeping hammocks and water tank; also the tent—a most useful article of our equipment, although it might have been of a more serviceable design. The personnel of each French car consisted of six persons—one "medicin dentiste," who held the rank of lieutenant, two surgeon-dentists graded as "adjutants" (*i.e.*, serjeant-major), two mechanics, and a driver, who were ordinary "poilus." Rather a crowd for such a small floor space, and I should imagine that in summer the sun's rays, combined with the heat from the gasoline burners and furnaces, would make the internal atmosphere resemble that of a stoke-hold.

During our enforced idleness we made many little excursions in the environs of Paris, such as St. Cloud, where we went one Sunday to see the Canadian Hospital, and where we witnessed the decoration of wounded heroes; also to Versailles, St. Germaine, and on one occasion as far as Fontainebleau. This last trip was made by "No. 2," newly back from the repair shop, and she celebrated her convalescence by staying out all night, greatly to the anxiety of members of the party who were left at home.

I don't think that all these little joy rides would have received the sanction—and free petrol—of the French authorities, had we not advanced the pretext that we were making test trips to ascertain if the design of the

cars was satisfactory on the French roads. There was a foundation of truth in this excuse. We quickly discovered several defects. For instance, it was found that the ingenious cantilever support of the extensions, although admirable on a smooth surface, had a disagreeable habit of digging into the ground when the car passed over "canivaux"—*i.e.*, open gullies passing across the roads—and owing to their solid construction, threatened disaster to the woodwork of the car had they encountered anything too tough to plough through. So we scrapped them and adopted the French idea of chains and adjustable steel supports. We also scrapped our mud guards, which were wide-spreading and almost as devastating in crowded thoroughfares as the scythe blades on Boadicea's chariot wheels. We discovered that the spring catches of the lockers inside the car were not proof against the vibration, and at the end of a journey we usually found the the floor strewn with a conglomeration of drug bottles, soap, ink, writing paper, etc. So we replaced these catches with wooden buttons.

On several occasions we went shopping, and our bulky presence in the streets of Paris was a perpetual joy to the natives, especially when we attempted to turn in a narrow street. When we had nothing better to do we took joy rides round the Bois de Boulogne. Once we were pulled up by the police, who protested that heavy cars unprovided with pneumatic tyres were forbidden on the beautiful smooth roads of the Bois. We directed his attention to the half-open window through which he could get a glimpse of a pair of feet belonging to one of our members who was taking a siesta in the hammock suspended in the car. "Ah," said the policeman, "you are taking the wounded for a drive. Certainly you may pass." And they never interfered again.

We were warned that occasions might arise "at the front" when we should be unable to procure rations or the means to cook them; so we laid in a stock of desiccated soups, dried fruit, biscuits, etc., etc., also various cooking utensils. As far as I am aware, these things still repose in the lockers of the cars, for the necessity to use them never occurred. But these little shopping excursions were the saving clause, for we were suffering from boredom of the very finest variety.

One day our hopes were raised to the highest pitch by the arrival of two officials who carefully measured the cars, the tyres, the petrol capacity, etc. They were very disturbed because they could not find any numbers on the engines, but they were eventually satisfied when we invented numbers of five cyphers and chalked them on the carburetters. We were forgotten for another ten days, and when we had quite reconciled ourselves to the idea that we were doomed to stay in Paris for the duration of the war, we suddenly received orders to present ourselves and the cars at the Bureau Centrale Militaire for instructions. Here we were given our necessary papers and told to start at once for a certain destination. It was very unexpected, and after our many weeks in Paris it was not so easy to uproot a weighty "ambulance column" at a moment's notice. We asked for a day's grace, and I think we advanced as a prime excuse that our washing had not yet returned from the blanchisseuse. But the commandant of the B.C.M. told us rather brusquely that he did not care a bit what became of us as long as we officially started that day. He also gave us a guide, in the person of a French corporal, and warned us to deliver him safe and sound at a certain depôt within three days, or fear the consequences. We took the hint, the guide and the papers, and returned to our hotel to pack. The rest of the day we spent poring over our maps and guide-books, carefully planning out our route, where we should sleep, and the time we should take between each stopping-place.

When we explained the result of our deliberations to the guide, he said it was quite excellent, and then courteously but firmly informed us that he had already secured his orders as to time and route and he was going to carry them out. We did not argue the point. We were only too glad to start by any route, at any time, and under anybody's direction. The corporal, having promised to be on the spot at 6.45 next morning, retired to enjoy an evening's freedom. We returned to our packing and the mechanics, I believe, spent the night cleaning and oiling the engines.

It has been suggested that the delay was due to a difference of opinion between the French War Office and the Medical Service, who were not at all pleased at the idea of seeing our cars sent off to the front before their own were completed. But subsequent events showed that our departure would have been expedited if we had not listened to the advice of certain people who counselled us not to be militarized, as we should then no longer be free agents.

It is reasonable to suppose that the French military authorities did not want a number of irresponsible civilians running about their lines of communications.

Change of Address.

Lieut. S. Vidôt, R.A.M.C., c/o Messrs. James and Copeland, Ltd., 6, Lloyd's Avenue, Fenchurch Street, E.C.

Philip R. Helyar, L.D.S. Eng., from 38, Wellington Square, Hastings, to 41, Eversfield Place, St. Leonards-on-Sea. Tele. 389.

Capt. H. H. Elliot, R.A.M.C., 8th D.A.C., B.E.F.

T. E. Ashdown Carr, M.B., B.S., 2/1 North Midland Field Ambulance, B.E.F,

Dr. F. W. Hogarth, 20, Ewing Terrace, West End, Morecambe.

Capt. G. T. Foster-Smith, R.A.M.C., attached to Egyptian Labour Corps, Headquarters, France.

A Case of Infective Endocarditis attacking the Tricuspid Valve.

Wm. C., æt. 24 years, a greengrocer, was admitted on the 7th March, 1917, into Addison Ward under the care of Dr. Shaw, for pains in his left side and breathlessness. When a child he had suffered from measles and bronchitis.

Nine weeks before admission patient had a bad attack of "influenza." He was feverish and had pains all over his body, and he was exceedingly breathless. On apparently recovering from the "influenza," patient found he was quite unable to exert himself without causing the most intense breathlessness. He went to see his doctor who treated him for cardiac trouble, and as patient did not progress satisfactorily he was sent up to the hospital and admitted.

On admission patient complained chiefly of pain in his left side and breathlessness. His temperature was 97°·2, pulse 128, respirations 36. He was obviously ill, the perspiration being very free and his shortness of breath was very marked and intensified on the slightest exertion. He was a frail-looking man, anæmic and thin, his cough was racking, and he used to bring up a large quantity of sputum which was greyish white in colour, viscid, and tinged with blood.

On examining his respiratory system it was found that the right side of the chest moved better than his left; tactile vocal fremitus was diminished on his left side, and percussion showed dulness over his left side. Auscultation showed diminished breath sounds on the left side. His breathing was rapid and shallow.

On investigating his cardio-vascular system there was found a visible pulsation in the fourth and fifth left interspaces medial to the nipple line. The impulse was diffuse and fluttering. The upper margin of the heart dulness reached the second space on the left side, the right margin was at the right edge of the sternum, and the left edge in the nipple line. On auscultation a harsh systolic bruit was heard best about two inches above the point of impulse and one and a half inches from the left margin of the sternum. This bruit, however, could be heard distinctly in any area. His urinary and nervous systems showed nothing abnormal. Dental caries and enlarged tonsils were found when examining his alimentary system.

Shortly after admission patient's temperature rose to 104°·2, his pulse rate being 144 and respirations 44. By 2 p.m. the afternoon after admission the temperature had fallen to 100°. It was noticed that until his death the temperature, pulse rate and respirations increased towards night and all fell towards day, the maximum being reached about midnight, the minimum about the middle of the afternoon. Sweating was profuse when the temperature was coming down, but patient's skin was dry and hot when the temperature went up. Patient was given digitalis.

Three days after admission, as patient's cardiac dulness was continuous with dulness at his left base, his left base was explored for pleuritic effusion. No fluid was found. Patient's pleurisy gradually cleared up.

Dr. Shaw examined patient and diagnosed "ulcerative endocarditis." He also remarked on the fact that the bruit being heard best at a point equidistant from the four heart areas,

i.e., aortic, pulmonary, tricuspid, and mitral areas, suggested the possibility of a patent interventricular septum. A blood culture was made and a pure growth of streptococcus longus was found. Two doses of antistreptococcal serum (10 c.c.) were given, but it was decided not to continue these injections. Examination of patient's urine now gave a positive guaic test, and albumen was present. Both disappeared within a week.

Patient remained in much the same state until April 7th, 1917, when it was noticed that a few very fine crackling râles were to be heard over the right lung in the mid-axillary line. As patient was now coughing up some greyish yellow sputum, a specimen was sent for bacteriological examination for tubercle bacilli. The result was negative.

An examination two days later showed that the râles were increasing (i.) in area of distribution; (ii.) in amplitude. There was no dulness on percussion at the apices of the lungs, but there was a little dulness at the right base. Patient's sweating became more profuse and his prostration after the sweating was more marked. On percussing the heart limits it was found that the right margin was now one inch outside the right edge of the sternum, the upper margin was still in the second space and the left margin in the nipple line.

On the 18th April, 1917, (42 days after admission) patient did not feel so well, but was still bright and cheerful. He had been losing more weight lately and he was beginning to look more anæmic.

On the 24th April, 1917, at 6 p.m. patient was feeling much about the same, the fine râles were heard in a much greater area on the right side than previously, and there seemed a dull area on percussion towards the right base. At 7 p.m. the same evening his breathing suddenly became rapid and shallow; sweating was profuse; his heart was beating at an extraordinary rate; his pulse was feeble. Patient was feeling depressed and wore an anxious expression, and as he became very restless a 1/6th grain I.M.H. was given at 8 p.m. He gradually became weaker and weaker and died at 6 a.m on 25th April, 1917.

An autopsy was conducted that afternoon: 24 oz. of blood were found in the thorax, also some air, *i.e.*, a hæmopneumothorax. At the back of the apex of the right lung was a gangrenous slough due to embolism of the pulmonary artery. There were small infarcts in the right lung, and on the left lung were signs of old pleurisy. There was no phthisis.

The right side of the heart was found to be dilated and hypertrophied. There was infective endocarditis of the tricuspid valve, all other valves being normal. The posterior cusp of the tricuspid valve was the most affected, and on it was a fibrinous mass as large as a pigeon's egg; the middle cusp had also on it a number of small isolated nodules of vegetation. An opening at the upper part of the interventricular septum, with smooth fibrous edges, was also seen.

The liver was congested, not fatty, but tending to become "nutmeggy." The spleen was greatly enlarged (504 grams); there were no infarcts in it. The kidneys were the typical "flea-bitten" kidneys.

Death was due to "acute infective ulcerative endocarditis."

A blood culture was made from the spleen, and the report stated that a pure growth of streptococcus longus was obtained on cultivation.

I am indebted to Dr. Shaw for permission to publish this case.

T. G. D. B.

Letters from Old Guy's Men on Active Service.

April 26th, 1917.

I don't know if a letter from me would be of any use to you. We went across by night from Southampton and spent next day the other side in a dismal town. That evening we went to the goods station and entrained in a very long bus, 46 carriages. This train was not quite like troop trains in England, when men entrain at a word and do not move till they are told to. Every time it stopped during the day half the men and officers got out and rushed to the buffet or talked to their friends, and when it started on again, rushed back with their arms full of provisions, dodging through other trains and getting on the footboard as near their own carriage as possible, and then walking along. During most of the day people were standing or even sitting on the footboard.

The second day we followed the Rhone valley, which was nice in places. We arrived at Marseilles at about 10 p.m., about 49 hours after we started. Then we spent one night in a rest camp. Next day we embarked, but for a week we hung about, getting leave into the town, where we drank café au lait by the pint and other things by the half-pint, and had "diner" and "dejeuner" —in fact, did nothing.

At last we sailed at about 2 or 3 a.m. on ——. That day was lovely, and as we went east we could see the coast half the day. I suppose we were 30 miles, at least, away most of the time, but you could see towns dotted about. Inland there was a very fine range of mountains. At about 4 p.m. it got a bit misty and windy, and land vanished. Then we watched the escort of T.P.D.'s taking the seas. Once one of them was hidden almost completely by four consecutive waves and their spray. It looked as if it would founder. That night we passed Stamboli, who was going well, so I am told, and next day we slackened a bit and arrived in the Straits of Messina, which we passed through from about 7 to 9 a.m. At about 5 p.m., when we had just finished tea—a very light one, the only light meal on that ship—there was a thud and a splash and a bit of a shake, and everyone came on deck and put on their life-belts and started lowering boats. The old ship went down in front and a little over to the side, but not enough to prevent the boats of both sides being lowered. T—— and I were together and helped to lower a couple of boats, but did not manage to get into one.

When the boats had gone the destroyers came alongside. The first was on the other side and we could not get round. The other, however, came along and suddenly we found a clear way so we went down a rope. She was sheering off a bit and we were the last on that time, but she came round again and picked off the old captain and we pulled up an old doctor who was paralysed on one side, and then she pushed off quickly and the old ship's stern went up and she dived before we had got more than a quarter of a mile or so. It is a curious feeling seeing a fine old ship with the belongings of men going down. She vanished 45 minutes after she was hit. A fair number of people got left in the sea, but nearly all got on to rafts and floats, and the boats picked up a good many. I was very struck with the sense everyone showed in not pushing round and getting in the way. Those who were not lowering boats waited and sang, chiefly the Long, Long Trail and Tipperary. When she had gone the destroyers patrolled round and looked for submarines. The other got a shot in, but we did not. I sat in the fo'castle while we cruised round picking people out of the water and off rafts and capsised boats until 4 a.m. One fellow struck me rather. He had been in the water several hours, and was sitting on a raft in his lifebelt only, singing like a bird. Irrepressible fellows these Tommies!

By about four it was getting a shade rough and we had a considerable difficulty in getting alongside another destroyer which came up. We transferred about four hundred to her and then left for here, leaving her and the sloop and several others to hang about and keep the boats together till daylight. We made for here and all of us on deck got absolutely soaked. At about 9 a.m. they opened a hatch and bundled about 30 of us into a smally hole. There many of us were sick, and everyone was jolly glad to get here at 2 p.m. Our party was very well managed. We were pushed through a gate where we were issued with a packet of cigarettes each and into motor ambulances to this hospital where we were supplied with pyjamas and a wash and dinner, after which we slept like logs for 3 hours or so, and then had another dinner. They could not attempt to feed us on the destroyer. Here we have been ever since and very comfortable too. By the way, all the Guy's men were saved without injury.

T.

Durban Club,
Natal,
April 1st, 1917.

Dear Sir,—I will tell you, if you would care to hear about it, of our Expedition to Mesopotamia and how we have taken two months to get half way. I will leave all the censoring to you, and if there is anything left then you may publish it if you like. I will begin by saying that one of my colleagues is a very good fellow of the name of St. Burke Moore, whom Guy's men a few years senior to me will remember.

Well, after passing through shoals of submarines and pushing them off with boat hooks (we heard afterwards that we were very lucky to get through at all), we settled

down to the usual routine of a calm voyage and managed to have a very good time. We called at Sierra Leone and enjoyed the place, but decided not to stay there. We devoted 24 hours to Cape Town and then came on here and camped in a beautiful spot by the sea and near the town. Hardly had we stepped ashore than the good citizens of Durban got hold of us and said, "What damned good fellows you are, come and dine and meet our daughters, come and have three days shooting in Zululand, come and play tennis and dance afterwards," and that's what we have been doing for a solid fortnight, and the men have come off if possible better than the officers, and I think there will be a mutiny when the order comes to step aboard the next transport. Durban is sub-tropical with its blazing sunshine, white buildings, palm trees, and gaily caparizoned Zulus. Europe and the war seem a very long way off here, and if the War Office could see us here drawing our pay and then prancing off in tennis togs they would grind their teeth with rage.—Yours sincerely,

F. V. BEVAN BROWN,
Capt. R.A.M.C.

Bombay.
April 10th, 1917.

I thought, perhaps, you might be interested to know how a few of the Guy's men and myself are faring in these parts. As far as Bombay is concerned I should think Hirsch and myself are having the most interesting time, being now chiefly connected with wounded and sick Turkish Prisoners of War, both men and officers. We got orders roughly a month ago now to clear our hospital of our own men to make room for a convoy of these fellows. Our feelings were naturally rather mixed, as it was rather hard to see our men leave what is quite one of the best temporary war hospitals I've seen, to make room for their enemy. Still it was deemed the best hospital to put these fellows in owing to it being easy to guard (we have of course mounted guard). Well, the Turkish prisoner is a fine big man, very quiet, and I should think jolly glad to be where they can get good food and plenty of it. By religion they are most Mahomedans, and thus when it comes to serious operations such as amputations, etc., it is difficult to persuade them that it is for their good, and not for any other reason that you wish to remove their limbs, it being a terrible thing for them to arrive in Paradise minus a limb, We have, of course, interpreters all around us, but our chief asset is a full Turkish Colonel, who is very sensible and as their senior officer, also wounded, persuades them that the operation is necessary to save their lives. Major Novis, I.M.S., F.R.C.S. (a London Hospital man), is our Surgical Specialist, and very sound and good he is, his great belief being "full drainage" of all septic wounds. He has as his section commander Hirsch, and they work very well together, especially when they start to plate bones, Hirsch then of course remembers all the technique, etc., of Mr. Fagge.

The wounds caused by the British bullet, bomb, and shrapnel fire is, I think, about the worst I've yet seen, from an X-ray point of view the way some of these poor fellows bones are smashed up is just appalling. The Turk is a very poor patient as regards standing pain, and makes a fearful fuss, but once you've dressed him and made him comfortable he is very grateful and salaams you for some time. I've had some very amusing episodes in my room as you may imagine, in 9 cases out of 10 the interpreter is more frightened than the patients. But I've now managed to acquire a few Turkish and Arabic words, and so we get along except for the awful heat. I used to think the rooms at Guy's hot and close, but they are ice palaces compared with the heat out here in which one has to work. I have two punkas and two portable fans and yet it is like the steam room in a Turkish bath. I generally see anything from 7 to 12 cases a day, and Major Novis and the other M.O.'s are very keen and come up and see the conditions themselves. The majority of our staff are Bart.'s men, but nearly all years senior to my time. Col. Beyts, the A.D.M.S. here, is a Guy's man, of course. Our nursing staff, except for about five V.A.D.'s, are all Australian sisters, and when once you get to know them they are very jolly to work with, but their methods are very different from our English sisters. This gives you a slight idea of our hospital at the moment and the inmates thereof. The Turkish officer is inclined to be a bit pro-German still, but the Tommy is just the opposite, and is of the idea that the English will now make their country like Egypt.

T. B. Heaton is, as I expect you know by now, at the new officers hospital here, and Martin was with him, but I think McNair has gone up the Gulf since. Minns has also returned there; the other day Stallman and Wallace both passed through on their way up. Black is Surgical Specialist to another hospital here, and J. B. Martin has come down from the 44th General to be attached to the same hospital. Polly Perkins is Naval Surgeon to the Port and is doing good work here. Other Guy's men are scattered all around and occasionally they came down on leave, or on their way home one sees them. From the GAZETTE I see you have made many and vast alterations in the running of Guy's, which, I trust, are working well. I was very distressed to see the terrible time Miss Haughton had had, I hope she is fitter again now.

Out here, of course, as regards food, we feel no pinch at present; things are very expensive, but there is plenty to buy. We play a lot of tennis after 5.35 p.m. for about an hour and a half, then it is much too dark to see anything; still, that keeps one fit. I have also had four or five swims, the water being quite tepid. I met the other day Surgeon-General Blenkinsop, who was passing through Bombay for farther fields. He did a tour of inspection of our hospital, and seemed to know all about

us long before, anyhow he told Hirsch and myself that he knew who we were, and said he recognised us!!!

Well, sir, I think this gives you some small idea of how most of us from Guy's are in Bombay, and we are all keeping fit, prickly heat being our only complaint, but that, I think, I have got under now.

H. NISBET ECCLES.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

[We would point out that we cannot *under any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—ED., G.H.G.]

Diagnosis of Appendicitis.

SIR,—I was much interested in the article on the Diagnosis of Appendicitis, by W. E. T., as I had a case a few months ago which simulated appendicitis, and which proved to be a very different affection. It occurred in a remote part of Cornwall. An officer on coast patrol duty was taken acutely ill, and the nearest doctor was called to see him; he diagnosed acute appendicitis and communicated with the military authorities, who ordered me to go and see him, with a view to having him transferred to a military hospital.

The history he gave me was as follows:—A week ago an attack of acute abdominal pain with sickness, which, however, stopped after a day in bed. Three days before I saw him he had another very severe attack of abdominal pain which doubled him up, and he went to bed: he did not vomit during the attack.

When I saw him he had a temperature of 102°, with rapid pulse; his tongue was very dirty, and there was sordes over it and also over his teeth, and he had not had his bowels open for two days.

On examination of his abdomen, it did not move well with respiration, was very rigid, particularly over the right iliac fossa, and was very tender over McBurney's point. Nothing could be felt on account of the tenderness and rigidity. He had a typical appearance of a patient suffering from appendicular abscess, so I sent him into hospital for operation.

The surgical specialist saw the patient and advised immediate operation, so he was taken to the theatre and anæsthetised. On pulling down his pyjamas to thoroughly clean the abdomen, it was seen that he had acute orchitis in the right testicle with a profuse gonorrhœal urethral discharge!

I am afraid that this account does not do me much credit, nor does it do credit to the two other doctors who saw the case, but I was so certain that the case was appendicitis that I did not examine the scrotum as I should have done.

It is obvious, of course, that the patient had concealed from us that he was suffering from gonorrhœa, and never once did he complain of pain in his testicle, and yet it was a gross error to miss such an obvious condition as acute orchitis. At any rate, the case has taught me to be very careful when examining an acute condition in or near the abdomen, and I have written this just to show how careful one must be, and also that occasionally one may be misled completely by the history as given by the patient, and thus make a false diagnosis which, with ordinary careful observation, should never have occurred.

B.E.F., France. H. H. E.
May 9th, 1917.

Papers by Guy's Men.

C. H. Mills, M.R.C.S., L.R.C.P. (in collaboration with Lieut.-Colonel L. W. Harrison. R.A.M.C., and Major C. F. White, R.A.M.C.): The intramuscular or subcutaneous injections of salvarsan.—*B.M.J.*, May 5th, 1917.

Temp. Lieut.-Colonel C. H. Fagge, M.S., F.R.C.S., R.A.M.C.—Gunshot fractures of the arm.—*The Practitioner*, May, 1917.

M. S. Pembrey, M.A., M.D. Oxon.: The question of economy in food.—*The Lancet*, May 12th, 1917.

M. S. Pembrey, M.A., M.D. Oxon.: The restricted supply of food: its relation to health and efficiency.—*B.M.J.*, May 12th, 1917.

John D. Malcolm, M.B., C.M. Edin.: Post-operative tympanites: its nature and some points in its treatment.—*Ibid.*

Notices.

Royal Institute of Public Health.

The following lectures will be given at 37, Russell Square, London, W.C. 1, at 4 p.m., on the following days:—

Wednesday, May 23rd.—"The Re-education and Training of Disabled Combatants," by Sir C. Arthur Pearson, Bart. Chairman, The Right Hon. Viscount Knutsford.

Wednesday, May 30th.—"Health and Insect Life in War and Peace," by A. E. Shipley, Esq., Sc.D., F.R.S., Master of Christ's College, Cambridge. Chairman, Surgeon-General Sir R. Havelock Charles, G.C.V.O., M.D.

The Unit Scheme of Food Rationing.

By E. HUGH KITCHIN, M.A., M.B. Cantab.

The essential feature of this scheme is the reduction of all scarce and necessary foods to a unit value.

The unit value represents a weight or quantity of each kind of food. This weight or quantity is fixed by the Food Controller, and may be varied by him from week to week. Foods which are scarce and essential have a higher unit value, *i.e.*, less food to the unit, than foods which are comparatively abundant.

The Food controller also fixes, and if necessary varies from week to week, the total number of units of food which may be consumed each week by (1) an adult, (2) a boy or girl, (3) a child.

For example, if we assume that the Food Controller fixes the number which may be consumed by an adult at 105 units for the week, the unit values of the rationed foods might be fixed as follows :—meat 1¼ oz., bread 2 oz., sugar 1 oz. If an individual used 70 of his weekly units on these essential foods, meat 26 units (2 lbs. boneless), bread 32 units (4 lbs.), sugar 12 units (¾ lb.), he would have 35 units left over for foods of lesser unit value such as cheese, rice, oatmeal, milk, potatoes, beer, etc.

When the Food Controller has fixed the values of the food units, he will cause them to be entered in a list which will be known as the "Schedule of Food Units." The following may be taken as an example. It need be neither lengthy nor complicated ; additional items can be added as required. It must be understood that this list is tentative and provisional.

SCHEDULE OF FOOD UNITS.

Class.		Unit Value in Ounces.
Meat	(*a*) Without bone, including fat ; raw preserved or cooked	1¼
	(*b*) With bone ; joints, chops, etc. ...	1¾
	(*c*) With much bone ; sheep's head, calf's head, ox tail, trotters, etc.	3
Bread, including cakes, pastry and biscuits		2
Flour, " cornflour		1½
Sugar, " sweets, chocolates ...		1
Preserves, " jam, honey, marmalade, ginger, syrup and treacle		2
Butter, " cheese, cream, cream cheese, suet, margarine, dripping and lard ...		2
Farinas " rice, tapioca, semolina, sago, macaroni, hominy, oatmeal, arrowroot, barley, dried peas, beans and lentils		5
Poultry, including game, rabbits and fish ...		4
Potatoes		1 lb.
Eggs		2 *eggs*
Milk		1 pint
Beer		1 pint
Whisky		1 glass

The schedule will be published by the Food Controller in the Press at a date prior to that on which it takes effect ; at the same time the number of units for the week allowed for individual consumption will be announced.

Each tradesman will be required to show in a conspicuous position in his shop the unit values of all the scheduled foods sold or supplied by him. In the case of any particular trade this list would be comparatively short ; for instance, a dairyman would exhibit the unit values of butter, eggs, cream and cream-cheese. It will be the tradesman's duty to see that the unit values are correctly given, and that they are changed when necessary in accordance with the Controller's orders.

The rich are encouraged to buy the more expensive foods by not placing too high a unit value on such foods. This arrangement puts the rich and poor on an equality ; since the rich by buying expensive foods free a corresponding quantity of cheaper food for the poor.

Beer is regarded both by physiologists and brewers as a food, and it is only fair to abstainers that a unit value should be put upon it. Whisky being made from barley might also be added. There is no object in including wines.

Much good meat is annually given to dogs, which under this scheme would have to share with their masters. If provisions become scarcer a low unit value would be placed on dog biscuits, horse flesh and offal.

The second essential of the scheme is the Food Book. Every person in the country will require one of these books, without which he will be unable to purchase any scheduled food. The books may be obtained by personal application at a Post Office. In the case of children the application may be made by parents or guardians. If an individual is unable to apply personally, the book will be sent through the post, on the applicant signing a declaration and enclosing a stamped envelope.

Each book should be of convenient size for the pocket. On the cover the name and address of the owner will be written, while at the foot of the cover the applicant will sign a declaration stating that this is the only book applied for. There will also be a space for the office stamp giving the date and place of issue. The pages will be numbered and ruled. (See specimen page below). Each purchase will be entered by the tradesman in ink as shortly as possible, giving the article and the number of units purchased. The tradesman making the first sale for the day will be required to add up the previous day's units and carry them forward in the columns provided. The unused units of one week cannot be used the next week.

In case it is difficult to supply official books in quantity, a folded sheet of paper or card printed in an appropriate manner would serve for several weeks. It will be advisable for the holder to keep it in a case or cover. A new book or card will be supplied by the Post Office in exchange for the old one. In case a book is lost, a new one will be issued only against a payment of half-a-crown by the applicant, this payment being refunded in the event of the book being subsequently found and surrendered to the Post Office. In general, every applicant will apply to the local Post Office.

Food Books will be of three classes, and coloured distinctively: (1) adult, twelve years and upwards; (2) children, 6–12 years, two-thirds of adult units; (3) infants up to six years, half of adult units.

Extra units may be allowed to those doing hard mental or physical work of an indispensable nature. A certificate to that effect, printed on the inside of the cover of the Food Book, stating the number of the extra units allowed would be signed by the works manager or other suitable official.

All Caterers supplying meals (*e.g.*, at hotels, restaurants, tea-shops, etc.) would place a unit value on each meal, such value representing as nearly as possible the amount of scheduled food supplied at that meal.

Below is shown a choice of meals for one day with their respective unit values.

Breakfast, plain	2½ units.
„ meat	4½ „
Lunch, meatless	2½ „
„ with meat	4½ „
Afternoon tea with one piece of bread and butter	1 „
Do. with cake	1½ „
Dinner	5-7 „
Supper	4 „

A daily allowance of fifteen units would enable a hotel visitor to have a meat breakfast, a meatless lunch, afternoon tea with cake, and a dinner of five units, leaving one-and-a-half units for whisky and beer.

The unit value of each meal will be entered in the customer's Food Book, and the customer will be required to sign or initial a voucher, showing the number of units consumed, to be retained by the proprietor. When the scheme comes into operation the hotel will start with the usual stock of food; the next day the proprietor will replenish his stock by obtaining as many units of food as the vouchers from the previous day warrant. In the case of confectioners and light refreshment dealers the portions or cakes, etc., will be of such a size as can be represented in units or half-units.

For the purpose of entertaining, unit stamps representing 1 to 5 units will be on sale at the Post Offices. They will, on sale, receive the office postmark, and be available for one week from date of issue, The unit value of the stamp will be entered in the Food Book of the guest, who will hand the stamp to his host, thus enabling the latter to buy additional food up to its value.

Producers of food (farmers, sportsmen, etc) and those with accumulated stores will be expected to enter in their Food Books the unit value of the produce consumed by themselves.

No scheme will altogether prevent fraud and evasion. To these offences serious penalties will be attached; both buyer and seller will be punished in case of collusion, and a repeated offence may lead to the closing of the shop.

The interests of all being at stake, it is expected that the public will jealously safeguard the scheme against infringement.

All vendors will be required to give a receipt for purchases, showing date, amount and unit value, and to keep a carbon copy for reference. This is already done in all stores and multiple shops, and the extension of the system to small dealers would involve no real hardship.

SPECIMEN PAGE OF FOOD BOOK.

The owner is a single person living alone.

Week ending Midnight on Friday, March 30th, 1917. Date.		Units for Week (adult) 105,	
24	Milk ½, meat (b) 6, bread 4, flour 8, sugar 12, jam 8, butter 4, rice 4, potatoes 7, oatmeal 4, eggs 3, beer 2½	63	63
25	Milk ½, beer 1	1½	64½
26	Milk ½, bread 4, beer 1	5½	70
27	Milk ½, bread 4, fish 2, cheese 4, suet 2	12½	82½
28	Milk ½, bread 4, meat (a) 6, butter 4, beer 1	15½	98
29	Milk ½, bread 4, beer 1	5½	103½
30	Milk ½, beer 1...	1½	105

In the case of families the booking of the items would be much simpler. Regular deliveries of milk, bread, etc.. might be entered weekly, Beer and whisky could be bought on adult cards only,

CONCLUSION.

Once this system of rationing is adopted, its simplicity and flexibility will enable the Controller to regulate the distribution of food with ease and cer-

tainty. Voluntary effort may do much, but a compulsory system is preferable, from the point of view of safety and fairness, to an appeal to honourable feelings which may be blunted by thoughtlessness or absent altogether. Nor is there any time to be lost, for it is most important not only to regulate existing supplies but to accumulate stocks for the future. No man can say with certainty what the effect of the submarine campaign will be, and we must not rest content until every barn or warehouse in the country, and even every church, is filled with grain. The German card system is admittedly a failure; it is cumbrous, since a separate card is required for each kind of food; and it is inequitable, since the poor cannot always obtain the ration which the card entitles them to buy.

Under any scheme it would be necessary to give the public some guidance as to the amounts of different foods which they ought to buy in order to maintain their strength.

The unit system would place rich and poor on an absolute equality, for none could buy more than his fair share of one kind of food without sacrificing other foods equally essential. A run on, say, sugar and potatoes, would be met by raising their respective unit values. The rise would lessen and equalise the demand, and so regulate the supply all over the country. We should no longer see one village with unlimited sugar and another with none at all. Beer would still be available for the worker, but beer-swilling would cease. The feeding of dogs would become a tax on their owners rather than on the country at large. Hotels, restaurants, etc., would fall without difficulty into the Controller's net. Farmers and other producers of food would not be so easily dealt with, but their patriotic feelings would tend to bring them into line with the rest of their fellow-countrymen. Hospitality would remain a practicable virtue, but extravagant entertaining would be stopped altogether. All this and much more could be accomplished by the immediate adoption of the unit scheme, which, it is claimed, is the simplest and most efficient form of food rationing yet devised.

Saxthorpe,
Parkstone,
Dorset.

E. HUGH KITCHIN,
M.A., M.B. Camb.

Honours.

D.S.C.

The King has been graciously pleased to give an order for the award of the Distinguished Service Cross to Surg.-Prob. Christopher T. Helsham, R.N.V.R., H.M.S. *Broke*, who worked with great energy and ability in attending the wounded during the recent action with German destroyers in the Channel.

Appointments.

R.N.M.S.

The following appointments have been made:—

To be Temp. Surgeons—C. M. Ryley, A. D. Marston, E. D. Scott, E. S. Bowes.

R.N.V.R.

K. J. H. Davies has been appointed Surg.-Probationer R.N.V.R.

R.A.M.C.

To be Major whilst employed at the Sunderland War Hospital—W. Robinson, M.B., B.S.

Temp. Lieuts. to be Temp. Captains—H. W. Evans, A. H. Smith.

To be Temp. Lieuts.—J. L. Rankine, J. E. E. Collins, E. W. Sheaf, G. Wacher, B. K. Nutman.

Officers relinquishing their Commissions—Temp. Captain H. M. Meyrick-Jones.

Volunteer Force.

A. Leeming (late Lieut. R.A.M.C.), to be Temp. Captain.

I.M.S.

Lieut.-Col. A. Miller to be Professor of Medical Jurisprudence, Medical College, Madras, in addition to his other duties.

Lieut. to be Captain—G. C. Covell.

Civil.

D. H. Forty, L.R.C.P. Lond., M.R.C.S., Medical Officer and Public Vaccinator for the Charfield District of Thornbury (Gloucestershire) Union.

Roll of Honour.

Wounded.

Captain J. Walker, R.A.M.C., attached to Hampshire Regiment.

Died of Wounds.

Surg.-Major A. H. Palmer (Staffordshire Yeomanry).

Pass List.

Examining Board in England of the Royal Colleges of Physicians of London and Surgeons of England.

FINAL EXAMINATION.

At the Examination held last month, the following candidates were approved in the undermentioned subjects:—

Medicine.—R. C. W. Stayley, E. W. Bowell, H. Millett, L. Gill, J. Victory, N. A. H. Barlow, R. S. Millar, G. R. Hubbard.

Surgery.—W. B. Buer, L. Gill, G. R. Hubbard, H. N. Pritchett, O. St. L. Campion, J. C. C. Howe, E. C. Hinde, W. J. Walters.

Midwifery.—H. Millett, E. H. Bryant, J. Victory, A. Bulleid, S. T. Wong, C. W. W. Armstrong, G. Noott, C. H. Laver, N. Kamchorn, J. C. Gie.

At a meeting of Comitia of the Royal College of Physicians of London, held recently, and of the Council of the Royal College of Surgeons of England, held on the 10th inst., the diplomas of L.R.C.P., M.R.C.S. were conferred upon the following gentlemen:—William Ernest Bowell, Oliver St. Leger Campion, Lawrence Gill, Joseph Christopher Campbell Howe, George Raymond Hubbard, Henry Norman Pritchett, William James Walters.

Royal College of Surgeons of England.

LICENCE IN DENTAL SURGERY.

FIRST PROFESSIONAL EXAMINATION.

Mechanical Dentistry and Dental Metallurgy.

At the recent Examination the following candidates were successful:—J. Alcée, A. C. Ayling, D. K. Gaskill, A. H. Grieve, E. C. Keet, C. P. Lake, J. Lauer, H. J. Lyon, P. J. Morrison, C. L. D. Pasmore, E. Samuels, E. F. Wilson.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Hints for Hospital Orderlies. By N. Corbet Fletcher, M.B., M.R.C.S. Published by Bale, Sons & Danielsson, London. Price, 6d. net.

This small book of some 50 pages is intended for the use of Orderlies who are taking up duties in Military Hospitals. Though it does not, of course, go deeply into questions of treatment of disease or wounds, it impresses on the orderly the necessity and importance of his work. Special stress is laid on the virtues of neatness, efficiency, and accuracy in obeying instructions. The publication should be extremely useful for those for whom it is written.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Birth.

POULTON.—On May 7th, at Wykeham Cottage, Woldingham, Surrey, to Dr. and Mrs. E. P. Poulton, a son.

Deaths.

ADENEY.—On May 2nd, at Hayward Lodge, Tunbridge Wells, Edwin Leonard Adeney, M.D., J.P., aged 58 years.

DOUDNEY.—On April 29th, at Komba, Northern Nigeria, of malaria, Dr. Leslie Doudney, W.A.M.S., aged 38 years.

FOWKE.—On April 27th, at Byfield, Northamptonshire, Frederick William Fowke, M.R.C.S. Eng., M.R.C.P. Edin., L.S.A. Lond., aged 73 years.

NASON.—On April 29th, at "Arbury," Stratford-on-Avon. John James Nason, aged 84 years.

TRAVERS.—On March 26th, accidentally drowned from s.s. *Rowena*, Otho Boyle Travers, M.B., B.S., only son of the late Otho Robert Travers and Mrs. Travers, of 171, London Road, St. Leonards-on-Sea, aged 37 years.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

DURING the last few years there has been a great increase of interest in the campaign against Venereal Disease. Perhaps the most convincing demonstration of this fact is that at present two plays are being performed in London dealing with the problem, plays which had been banned for years and which would not be allowed now were it not realised that the question of venereal disease is one which must be brought before the public. The enormous wastage caused by venereal disease in the army, nearly 100,000 cases in the British Army at home quite apart from Colonial troops and Expeditionary Forces, has made the War Office realise the urgency of the situation. For many years past the medical profession has taken an increasing interest in syphilis in view of the advances in our knowledge of its pathology and its association with many diseases which used not to be thought to be syphilitic.

The ultimate result of all this revival of interest is that the Government have inaugurated a definite plan of campaign against venereal disease. Venereal clinics under the Local Government Board have been started all over the Kingdom where radical and efficient treatment is given free to all who apply for it.

Sir William Osler, in a lecture delivered before the Medical Society of London, summarises the situation in his own inimitable style. Taking the figures of the Registrar General's Returns for 1915, he puts the deaths due to the spirochæta pallida above 60,000, making it accountable for many more deaths than any of the other infections.

While fully appreciating the value of the newly-established clinics, he is not confident that the measures so far adopted will suffice in themselves to deal with the problem. Neither notification nor compulsory treatment are at present in force. The venereal clinics have not been in existence long enough to enable any estimate to be made of the number of patients who will submit to prolonged treatment, when their immediate symptoms have been relieved. Experience in the United States seems to show that a large proportion of them will not do so. While fully realising the strong arguments against compulsory notification and treatment, Sir William Osler thinks that ultimately such steps will be necessary when public opinion is sufficiently educated to tolerate it.

We cannot help feeling that if such drastic steps as notification and compulsory treatment are necessary for dealing with the ravages of syphilis, now is the time for introducing them. At the end of the war there will be a big revulsion of feeling against the interferences with

personal freedom which have been brought about by the Defence of the Realm Act, and there can be no doubt that any further schemes which interfere with the private affairs of individuals will be keenly resented by the masses. At the moment the nation is more amenable to discipline than it has ever been before or than it is ever likely to be again. Further, the press is occupied with the questions of the war, and a big press campaign against compulsory notification and treatment is less likely to be undertaken now than later. Treatment of venereal disease is compulsory in the Army, and it is but a further step to extend this to those who supply the Army, which means at present practically the whole country.

Meanwhile, during the period in which the public are being educated or while our rulers are deciding whether they will force it to be educated, the best use possible must be made of the facilities for treatment that have already been established. The only hope of inducing patients to undergo a prolonged and what may appear to them an unnecessary amount of treatment is that they should have confidence in the medical man in charge of the clinic at which they are attending. This necessary confidence cannot be present if the staff of the venereal clinics is perpetually changing. The male clinic at Guy's, though it has only been established a few months, has already lost both the medical men who started it, nor are their successors likely to remain for any lengthy period. This rapid series of changes has been partly due to the call of the War Office for men. What the Local Government Board is building up the War Office is helping to destroy. If the campaign against venereal disease is really as important as Sir William Osler, the Government, and practically everyone else admit, every possible step must be aken to prevent the vagaries of recruiting officers from interfering with the work. It is no good saying that the work must be done by substitutes. No substitutes are available. If a man is sufficiently fit and vigorous to conduct a large venereal clinic he is fit enough for the R.A.M.C. If the whole scheme is not to become a fiasco the Government must be firm and, through the Local Government Board, insist that medical men employed in the clinics shall not be called away from their work, admitted by all to be of extreme national importance, in order to enter the army. Full use can be made of women in female venereal departments, but they obviously cannot act as substitutes for men in the male departments. The War Office and R.A.M.C. Authorities must be made to realise that whatever they may be able to do with other medical men they are not to be allowed to touch those connected with the fight against Venereal Disease.

WE regret having to add the name of yet another Guy's man to the victims of the submarine campaign in the Mediterranean. Capt. Tilbury was reported missing, believed drowned, about a fortnight ago. Presumably he was on the *Transylvania* We publish a photograph of him in this issue.

The question of the submarine campaign is shrouded in nearly as much mystery as that of the national food shortage. On almost the same day a prominent member of the Government was saying that the submarine menace was well in hand, while Lord Charles Beresford who is, at any rate in his own opinion, something of a naval expert, was maintaining that quite the reverse was the case. The experience of Guy's men would tend to make us think that Lord Charles' view is not very overdrawn, for all the old Guy's men who have gone out to the Eastern fronts during the past six weeks have been torpedoed. Either they must have been singularly unfortunate in their choice of vessels

or the submarine menace, at any rate in the Mediterranean, can hardly be said to be well in hand.

By the time these lines appear in print the Hospital will have lost another of its surgical staff. Lt.-Col. Fagge has given up his work in London in order to act as a Surgical Specialist to Casualty Clearing Stations on the Western Front. Much as we regret his loss from the point of view of the Hospital we feel that he will find a Casualty Clearing Station a welcome change after his prolonged experience of Base Hospital work in London. We hope that his departure does not mean that readers of the Gazette are no longer to have the benefit of the most lucid and useful articles on war surgery which he has been contributing to our columns during the last three years.

The Hospital is also losing the services of Mr. F. A. Knott, who is leaving the Bacteriological Department to join the Navy. We understand that for a time Mr. Knott may be able to continue his attendance at the evening venereal clinics.

The American Army has begun to arrive in the form of a medical unit of some thirty qualified men with a proportionate number of orderlies and nurses. Apparently they are to staff a Base Hospital in France. We hope that sooner or later some of the young medical men from the States will be given the opportunity, which we feel sure they would be only too glad to obtain, of seeing something of more active warfare either as regimental medical officers or in field ambulances.

We are sorry to hear that the course of lectures on venereal disease delivered in Guy's during the month of May has been very inadequately attended. There can be no doubt that this has been due, not so much to lack of interest in the subject on the part of general practitioners, as to the general disturbance and uncertainty caused by the great War Office blunder in calling up all medical men under 41 without reference to the medical authorities who control the supply of recruits for the R.A.M.C. Another obvious reason for the poor attendance is that most civil practitioners are at present grossly overworked.

Mr. F. J. Steward is, we hear, a candidate for election to the Council of the Royal College of Surgeons, the voting for which takes place early in July. At present Guy's have only two representatives on the Council. We hope that all Guy's men entitled to vote will make a point of supporting Mr. Steward.

Death is taking its toll not only of Guy's men at the war but also of some of the Hospital's most prominent supporters in civil life. In January of this year the death of Mr. Frank Debenham took place. He had been a Governor since 1898, and during his life took an active interest in Guy's and contributed generously to the Hospital funds. On his death he left us a legacy of £3,000 in preferred ordinary shares in Debenham's Limited.

We regret to hear ef the death of another Governor, Mr. Henry Lafone, at the age of 88. He was connected with Butler's Wharf, and did a great deal to help the Hospital in the financial difficulties in which it was involved some twenty years ago.

We call our readers' attention to the notice of Dr. Hurst's kinema demonstration on page 213.

As we go to press we hear with regret of the death of Mrs. Frederick Taylor. We wish on behalf of our readers to express our deep sympathy with Dr. Frederick Taylor in the loss he has sustained.

Obituary.

Capt. A. TILBURY, M.R.C.S., L.R.C.P., R.A.M.C.

CAPTAIN A. TILBURY, son of John Tilbury, Sheardown House, Oakley, Hants, aged 29, was educated at Andover Grammar School and, as a private pupil, by Rev. J. Atkins, M.A. He entered Guy's in October, 1906. He played Association Football for the Hospital for one season, but while doing the appointment of Extern his health broke down and he developed a small tuberculous focus in his right apex, and had to leave the Hospital for a year, during which time under Dr. Fawcett's kindly supervision and care he recovered and took the Conjoint Diploma in January, 1913. He then did Clinical Assistant in the Throat Department and in the Genito-Urinary Department, at the same time joining his brother, Mr. R. Tilbury, in partnership at Queen's Road, Peckham. When war broke out he was called up as a reservist in the London University O.T.C., and was at once given a commission in the R.A.M.C. He was sent to Canterbury Barracks under Col. W. W. Pope where he remained for one year. In September, 1915, on obtaining his Captaincy he was sent to Egypt with the Mediterranean Expeditionary Force, and was stationed at Boulac for over a year and then moved to Kantara. In March of this year he came home on special duty. In May he proceeded overland to a French port with troops and sailed on May 3rd on the transport Transylvania. She was torpedoed and sunk on May 4th in the Mediterranean. Captain Tilbury has been reported "missing believed drowned" by the War Office.

A great friend has sent us the following appreciation of Captain Tilbury:—

"Guy's men, scattered among the various expeditionary forces all over the world, will learn with intense regret the loss of Arthur Tilbury by drowning at sea, and much sympathy will be felt for his family, especially for Mrs. Edmond who, as Sister Cornelius, rivalled in popularity that of her brother as student. Since leaving Guy's his manly honest character has endeared him to all those with whom he has come into contact, both in private practice and in the Army."

"His disposition was of that sunny cheery type which helps so many people 'along the road,' and, as one who had the honour of being his closest friend, I feel that his death leaves a gap which can never be filled. Truly Guy's is giving of her best."

We enclose with this issue of the GAZETTE a reproduction of a photograph of Capt. Tilbury, which will be much appreciated by his numerous friends.

Lieut. M. W. A. SANDOE, Devonshire Regiment.

LIEUT. M. W. A. SANDOE was the eldest son of Dr. and Mrs. Sandoe, of Broad Clyst, Devonshire. He was 21 years of age and was killed in action on May 7th of this year. He was educated at Allhallow's Honiton, Guy's Hospital, and Durham University. His Colonel writes of him to his parents:—"Your son was a most excellent officer in every way; the men thought a great deal of him. I had a very high opinion of him, and he is a great loss to me." We hope to publish a photograph of Lieut. Sandoe in a future issue.

Hand Ambulance Fund.

A letter has been received from the Clerk to the Governors of the Hospital, acknowledging the receipt of £18 14s, for the purchase of a hand ambulance for use on the District. The Governors wish to express their hearty thanks to readers of the GAZETTE for their financial assistance, which is much appreciated.

Captain A. TILBURY, R.A.M.C.

(Reported Missing, believed Drowned, May 4th, 1917.)

With the French Red Cross Dental Ambulances.

BY AN OLD GUY'S MAN.

PART III.

At 6.45 next morning we assembled outside the hotel, cars and personnel. Of course our guide was nowhere to be seen. He strolled up half an hour late and enquired if we were nearly ready. We did not waste time telling him our opinion of his punctuality, but cranked up and started for the Porte St. Denis

Our first stop was at Beauvais, where we had lunch. I don't know very much about Beauvais, except that it is a quaint old town and that in medieval days it bred militant bishops who had a predilection for stone clubs. Also we have cause to remember that the entrance to the auto-park is guarded by a deep gully, which was nearly the undoing of car No. 1. We went over it at a fair speed, and the ensuing bump shook up the contents and broke two bolts in one of the rear wheels. It cost us some hours for repairs, but it was the only damage sustained by No. 1; whereas No. 2 had the costly habit of shedding grease caps, nuts and glass windows everywhere it went.

We left Beauvais at 4.30, and reached Amiens about 8 o'clock, where we stayed the night. The town was so full of troops that we had some difficulty in finding accommodation. Eventually we put up at a third-rate commercial hotel, where we found it impossible to sleep owing to the din of the guns a few miles outside the town. In the dark we nearly succeeded in butting down the façade of the hotel in our endeavours to take the cars into the courtyard. We gave up the attempt when we discovered that the entrance was too small, and left the cars in a side street for the night.

We started next morning at 8.30 and arrived at Montreuil at 1 o'clock, where we took in petrol. From there on to Calais *via* Abbeville, Boulogne, Marquise, and Etaples, reaching Calais about 7-30 p.m. This last run over the downs in the glorious early autumn was a most enjoyable stage of our trip. The only discomfort was the white chalk dust, which penetrated everything and gave us the appearance of grey ghosts. It was quite a long run, and on arriving at Calais we insisted on putting up for the night in spite of the protests of our guide, who declared that we must report at Mardyck that night. However, we were too hungry and tired to go on, so this time we defied him.

The weather had changed by the morning, and we set out for Mardyck in a cold drizzle, and after losing our way several times, arrived at the auto-park about 10.30. The Commandant, who had not received any notification from Headquarters, was rather mystified at our arrival, and we were detained and the cars impounded, whilst he telephoned to Paris to find out who we were and what we wanted. Once out of their hands, the authorities in Paris had apparently forgotten all about us, and as the hours went by without any answer, we were faced with the prospect of spending the night in the cars, there being no accommodation for us in the huts. However, at 5 o'clock the Commandant decided that we should be allowed to go into Dunkirk for the night, and he placed a motor car at our disposal, with injunctions to report to him next morning at 9. That motor ride was an uncomfortable experience. The car was one of those rough and ready vehicles used in the Army for the transport of light stores. The body was made of rough loose planks. It may have had springs, but we certainly did not notice them.

Our chauffeur seemed to be in a fearful hurry, and he rattled us over the cobbled roads at something approaching forty miles an hour. We, the unfortunate passengers, were shaken up and down, deafened by the noise and half asphyxiated by the dust and petrol fumes. French petrol has a perfume of its own. Fortunately it was not a long run, and we eventually pulled up in the Place Jean Bart, with a jerk that nearly shot us through the canvas. We found ourselves opposite the Hotel des Arcades, and having had enough "joy-riding" of that kind, we decided to go no further. Our chauffeur offered to call for us in the morning, and promised to bring a better conveyance, otherwise we threatened to walk.

Whatever the hotel may have been in pre-war times, it presents rather a battered appearance to-day. In common with nearly every other building in the "place," and for that matter the entire town, it did not boast a whole pane of glass in any of its windows, and the façade was pitted and pocked with shrapnel, the result of many bombardments, aerial and otherwise. The interior had also suffered. The floor of the room in which I slept was pierced in four places, and the corresponding holes in the ceiling marked the passage of several large pieces of shell.

Whoever occupied that room at the time it actually occurred must have passed a very disturbed night. The window frames were boarded up and pasted over with brown paper to prevent the passage of the smallest ray of light, and incidentally fresh air. There were two doors, one of them leading into the passage; the other, which I found unlocked, was originally the entrance to an adjoining room. But that room had been blown clean away, and anyone passing through the door would have fallen into the chaos of bricks and tiles forty feet below.

In the morning the chauffeur turned up smiling, and this time he brought a long low-bodied racing car. The journey in had been uncomfortable, but the return was hair-raising. The man was obviously accustomed to driving a fire engine, and he raced the car along at break-neck speed, taking the corners on two wheels and

hooting like a demon. If there is a special Providence guarding the lives of French chauffeurs, I imagine that it is kept busy day and night.

Fortunately there seems to be no limit to the number of cars at the disposal of the French Army, and if one "piles up" and the occupants are still intact, they simply telephone to the nearest "Parc" for another car and continue their journey, leaving the damaged vehicle by the roadside.

On our return to Mardyck we were informed that instructions had at last come through from Paris, and we were to be attached to the ——th corps d'armée and our depot would be the Caserne Jean Bart in Dunkirk. We were told to go there as soon as possible and report ourselves to the D.E.S., *i.e.*, G.H.Q. During the morning we washed down the cars in a very dirty little pool of water. Then a sergeant and two men appeared and turned out the tool lockers and made an inventory of all the contents. They presented us with another mass of papers, without which one cannot move anywhere in the war zone, and sent us on our way with a pilot car to head the procession. This pilot car broke down before we had covered half the distance, and as she obstinately refused to start again we left her by the roadside, taking the guide on board one of our own cars. So we arrived at the Caserne Jean Bart. which, as it turned out, was destined to be our headquarters for many weeks. Having reported ourselves and stored the cars, we set out in search of billets.

At the Caserne we made the acquaintance of an exceedingly courteous French lieutenant, who took us to the Mairie and explained our wants to the mayor. That worthy presented us each with a ticket entitling us to rooms at the rate of one franc per night, and armed with these "billets de logement" we sought the addresses written thereon. The first we visited was the back room of a small barber's shop; but since the disappearance of the upper part of the premises "through the accidents of war," the proprietor had stored all his spare furniture in this appartment. Moreover it was used as a waiting room for his customers. So we voted it unsatisfactory, and sought the second on the list.

This turned out to be the first floor above a laundry, and Madame, the proprietress, enquired so loudly into our antecedents and morals that the neighbours gathered round and took a lively interest in us.

After that, we concluded that we should be more comfortable in an hotel. So we engaged rooms at the Hotel du Chapeau Rouge. There we were fortunate in finding really comfortable quarters. It is one of the few buildings in Dunkirk which has wholly escaped the aerial attention of the Hun. In fact, its vitrious snobbery is overwhelming in this windowless town. It also boasts a little garden provided with benches and tables, at which we sipped our "aperitif" and were sipped by the mosquitoes. There are many mosquitoes in Dunkirk, perhaps due to the semi-stagnant moats which surround the town. I don't know whether English blood was a novelty to them or whether they were underfed, but they certainly gave us a lot of attention, and every morning we found a fresh crop of angry red bumps on our faces and hands.

Dunkirk is the town of Jean Bart. I am rather misty about the history of this gentleman, but I understand that he was either a soldier or sailor who defeated some enemy of France, perhaps ourselves. At any rate he is the tutelary deity of the town, and his statue stands in the centre of the Place Jean Bart, still proudly defying the enemies of France. An aeroplane bomb dropped within a few yards of him, shattering all the windows in the "Place" and decorating the surrounding houses with shrapnel holes, but the statue remains without a scar. He gives his name to many streets, buildings and brands of beer, and the people are proud of him.

The town itself is paved with cobbles and broken glass. Some of the buildings are very old and interesting, and some are missing since the last bombardment. The beautiful church is in ruins, having been the mark of the first two shells that fell on the town, fired from a distance of nearly twenty miles. The third projectile completely gutted the military hospital. The cellars of the more substantial houses sport a little red flag and the placard, "Refuge en cas d'alerte," and it is down these cellars that the inhabitants retire when the syrens bray out the warning that there is trouble coming from the skies. In spite of these little excitements, the inhabitants are very cheerful and business goes on as usual.

The military restrictions are very stringent. Civilians are not allowed out after dark, and woe betide anyone who lights a pipe or cigarette in the streets after nightfall.

As is usual in all French towns, there are many cafés and restaurants, and some of the latter are quaintly named. One of these, opposite the prison, bears the inscription, "On est bien mieux ici qu'en face." But the English Church has been built on the angle where two streets diverge and butts in between the estaminet and the prison, so the sign now indicates contempt of Protestantism rather than the gaol.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Abdominal Operations made easy for the Patient.

CLINICAL LECTURE BY R. P. ROWLANDS,

Gentlemen,—An abdominal operation seems a formidable ordeal to the patient. The ever-ready tales of his experienced friends frighten him and the attendant pomp and circumstance appal him. Above all, the restraint and prolonged confinement to bed which are supposed to be inevitable, are irksome to anyone of normal activity of mind and body. The weakness born of enforced idleness is as depressing as it is unnecessary.

Are not some of our surgical habits and rituals too rigid? Are not we guided too much by tradition and too little by reason and commonsense? Surely we should endeavour to make things easy and pleasant for the patient provided that his safety is not compromised. The object of this lecture is to suggest some of the ways of doing this and of improving the results of these operations at the same time :—

1. The preparations are made easy and efficient.

2. The operation is designed to cause the minimum of pain, shock, and weakness of the abdominal wall.

3. The after-treatment follows the teachings of experience and commonsense.

Preparation.—The operation for appendicitis will be taken as an example, but the same principles are applicable to all, with certain modifications. Here the mind is as important as the body, therefore the patient's point of view is considered, his fears ascertained and dispelled by showing how groundless they are, and by assuming a hopeful attitude and dwelling on the cheerful side. How fortunate that a cure is possible! This means that he will soon be able to lead a healthy active life again, and even to travel abroad without fear of a sudden and severe attack. The smallness of the risk from the anæsthetic and operation, the improvements in the administration of anæsthetics involving no sense of suffocation and but few after-effects are explained. In all cases, and particularly in children, the period of waiting is made as short as possible. A little child need not be told until just before the operation. Then he is told he is going to have an operation to make him well. As soon as he is fit he will be taken to the country or seaside for a delightful holiday.

Whenever possible the operation is fixed for the early morning when the stomach is empty and the patient has had a good sleep. To ensure this a hypnotic is given if necessary any time during the night before the operation. A quick and certain purge is given about 24 hours before the operation: an ounce of castor oil is usually suitable for an adult and a proportionate dose for a child. If this has not acted by the evening, a dose of salts is given in a tumblerful of hot water. Thus, the much hated enema is generally avoided. It is a pity to defer the purge until the evening before the operation, for this often means a restless night and depletion of fluids before the ordeal. Some patients require no aperient before an operation and are, in fact, better without one. A hot bath in the evening promotes sleep, and prepares the skin. Any shaving that is required is done overnight, but the uncomfortable and especially the moist compress is avoided altogether. Next morning the abdomen is gently rubbed with tincture of iodine and a sterile pad applied.

Operation.—It is infinitely easier and safer for the patient to have the appendix removed as soon as possible during the first attack. It

is easier because he is usually in pain or suffering and welcomes a radical cure with more avidity than when the attack is over. It is safer because the risk of an early operation is less than that of leaving alone. The earlier the operation the less the risk, and experience shows that when it is undertaken within 24 hours the mortality is no greater than that in the quiescent period, for appendicitis kills by complications which take time to develop. The early operation saves life, time and money, and avoids the pain, suffering and anxieties of repeated attacks.

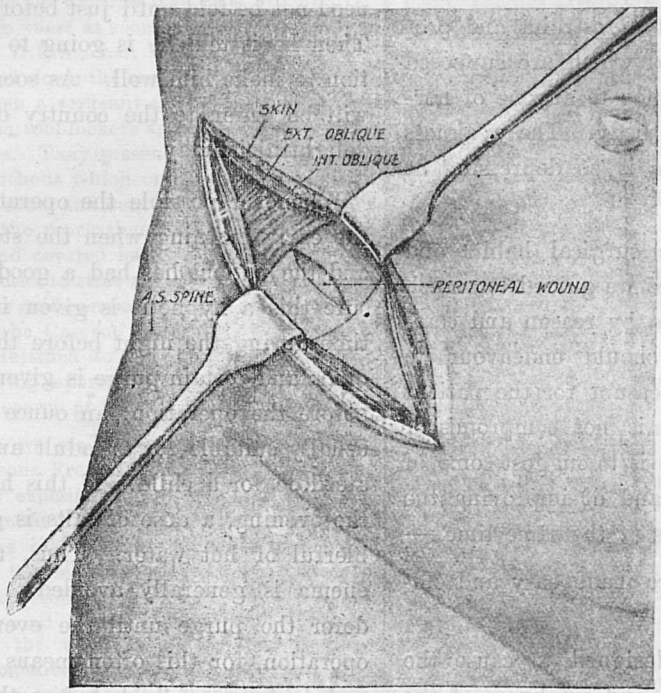


FIG. 1.

An oblique incision five inches long is made through the lower point of trisection of the line extending from the right antero-superior spine to the umbilicus. As a rule the wound is bisected by this line, but sometimes it is placed either higher or lower than this. In any case it is kept well out, for many operators at first place it too far in and thus add to their difficulties. The left forefinger and thumb draw the skin and fat aside to display the external oblique, which is incised parallel to its fibres. The knife is laid aside and any bleeding vessels at once secured with artery forceps. The opening in the external oblique is enlarged with scissors and retracted well to show the internal oblique and the united aponeuroses of the internal oblique and transversalis in front of the rectus muscle. The junction of the internal oblique with this aponeurosis is picked up with toothed dissecting forceps, and divided with scissors, the incision being carried transversely inwards for at least one inch so as to display the rectus and then outwards between the muscular fibres of the two deep muscles already mentioned. By working in this order there is no difficulty in estimating the depth required, and the transversalis fascia is at once displayed. The muscular fibres of the internal oblique and transversalis are well sepa-

rated with the fingers, and the rectus is drawn inwards to enlarge the wound.

The transversalis fascia, extraperitoneal fat, and peritoneum are picked up together and carefully divided with blunt-pointed scissors. The opening thus made is enlarged with fingers, the left fore and middle fingers are inserted to examine the pelvic space and pelvic viscera in every case. If these are normal, the cæcum is sought just behind and to the outer side of the incision. It is picked up with two fingers withdrawn whenever possible and held upwards with the left hand. Thus the base of the appendix is displayed without delay and the appendix itself is soon released from any adhesions and delivered.

The end of a pad of gauze is packed into the wound behind the cæcum and appendix to hold them forwards. A strong pair of ordinary artery forceps pierces the meso-appendix at the very angle between the appendix and the cæcum and draws a piece of strong linen thread through the opening thus made. The forceps are then used to clamp the base of the appendix, the points not projecting beyond the latter. Another pair is applied in contact with the first and distal to it. The ligature is now tied firmly round the meso-appendix well away from

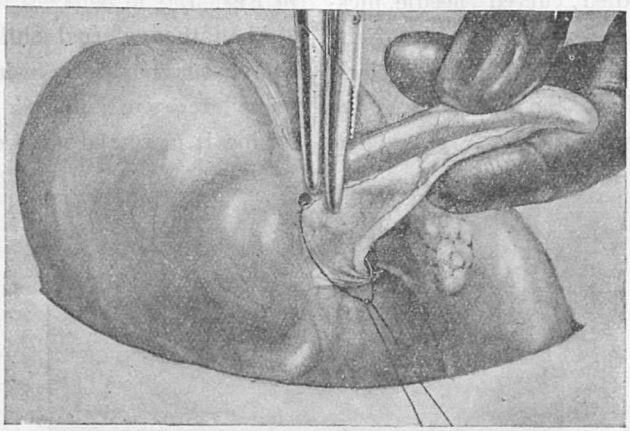


FIG. 2.

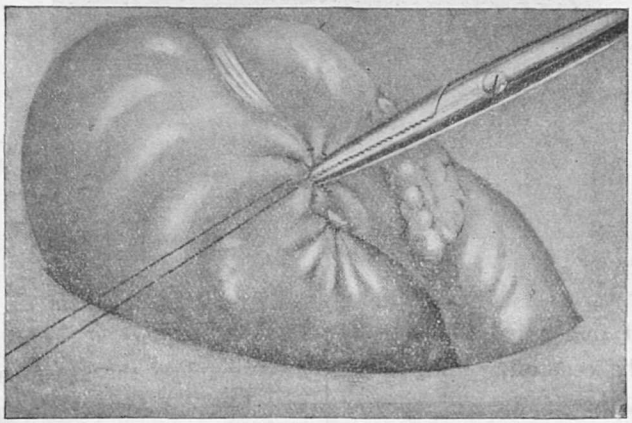


FIG. 3.

the appendix, while an assistant holds the appendix forwards with the forceps (Figs. 2 and 3).

The ligature and mesentery are divided, care being taken to leave a good stump of mesentery beyond the ligature. This ligature secures all the vessels of the meso-appendix. A purse-string suture of fine linen thread is inserted with a round bodied curved needle, picking up at intervals the serous and some of the muscular coats of the cæcum, making a circle half an inch away from the appendix. The appendix is divided with the knife passed between the two pairs of forceps, and the stump is invaginated with the remaining forceps by the assistant as the surgeon ties his purse-string. The two forceps and the knife, being contaminated, are taken away so that they can not be used again during the operation. The meso-appendix is examined to make sure there is no bleeding going on. The cæcum is returned and the omentum displaced inwards so that it may not get in the way during the next step.

The left forefinger lifts and hooks up the parietal peritoneum, thus bringing the margin of the opening into view to be accurately seized and held well forwards by two Mayo-Oschner forceps one above and one below. When this is done, the opening is rapidly closed by a purse-string suture of No. 2 sterile catgut. The deep muscles are approximated as shown in Fig. 5.

Then the external oblique is sewn up in a similar manner. By using this method three knots are saved, one in each layer, and the sewing is more and not less secure. By threading a long piece of catgut in the curved needle used to close the peritoneum, the same piece will last out for all the muscular layers also, and time is saved.

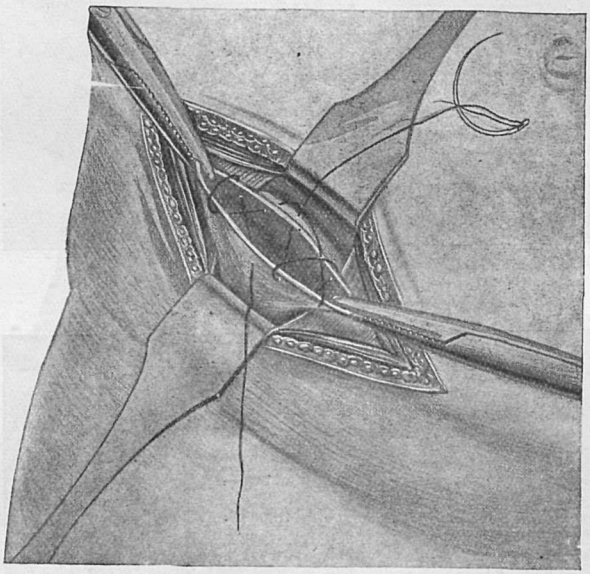


FIG. 4.

The clamped vessels are tied with catgut and the skin wound closed with a continuous suture of fine black linen thread on a long, fine, straight needle. The black thread is more comfortable than fishing gut, and far more easy and painless to remove.

With practice, and unless there is some unexpected difficulty, the operation, well done,

should be completed within ten minutes, and therefore the administration of the anæsthetic lasts only about fifteen minutes if the surgeon takes care to make all his preparations, has his instruments ready, and his needles threaded before the anæsthetic is commenced.

It may be needless to say that this well-planned shortening of the time of the operation and anæsthesia makes a very great difference to the after-comfort and well-being of the patient. He is rarely sick or ill, is often round

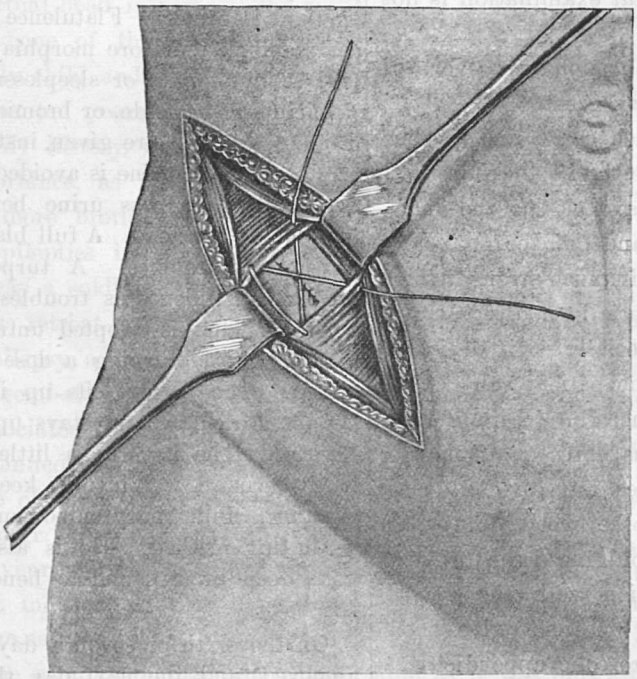


FIG. 5.

in a few minutes, not uncommonly asking for food.

Certain objections are often raised to the grid-iron incision, notably (a) that it does not allow of an adequate exploration when the diagnosis is doubtful; (b) that it does not give enough room for finding and removing the appendix in a difficult case. The first objection is met by saying that the incision is not recommended for the exploration of doubtful cases, especially when it is important to *see* all the upper abdominal viscera in their natural position. It is, however, possible for a practised hand passed up from the iliac wound to *feel* the upper abdominal viscera and to note such abnormalities as chronic gastric or duodenal ulcers or new growths, gall-stones in the gall-bladder, bile ducts or distension of the gall-bladder, enlargement of either kidney, etc. It is easy to feel the pelvic viscera and to see most of them. If a lesion is discovered in the upper abdomen another incision can be made.

(b) As regards the room afforded for removing the appendix, the opening of the rectus sheath and the displacement inwards of the rectus makes a great difference. The writer adopts this plan as a routine and finds it especially valuable in children. If more room is required the opening in the rectus sheath can be enlarged either upwards or downwards for several inches and accurately closed afterwards without leaving any appreciable weakness of the

abdominal wall. With these simple variations a very large opening can be obtained; and the writer has in some hundreds of cases always found it sufficient to find and remove the appendix. He has never had either to make a separate incision or to cut across the fibres of the flat muscles.

The incision is used as a routine for—

1. Acute cases where the diagnosis of appendicitis is fairly certain.

2. Chronic cases where the diagnosis is fairly certain and a general *visual* examination is not necessary.

The advantages of the incision over a vertical one in these cases are very great.

1. The operation is much easier and quicker for even with a poor anæsthetist the intestines do not tend to prolapse, and closing the abdomen is, therefore, easier and quicker.

2. The abdominal wall is much stronger than after a vertical, and especially a direct vertical incision. This is especially so if drainage is required. Therefore, the patient can get up earlier without risk of hernia. With a long incision through the rectus fibres or displacing them inwards nerve fibres are divided, with consequent weakness of the mesial muscular fibres causing a diffuse bulging later on. A paramesial vertical incision with the rectus fibres displaced outwards does not give good access to an adherent retro-colic appendicitis.

3. It is placed more directly over the usual position of the cæcum than any other incision, and it is so valvular that even if the patient got up the next day there would be no risk of hernia.

4. The disturbance of the abdominal viscera is reduced to the minimum, less air is allowed into the abdominal cavity as a cause of after-pain, less manipulation is necessary with consequently less risk of paralytic distension.

5. Adhesions are far less likely, for the insion is not over small intestine or omentum and the peritoneal wound is so small that it can be easily closed with a purse-string suture, leaving very little room or roughness for adhesions to take place.

AFTER-TREATMENT.

A rectal saline, half to one pint, is given before the patient is round from the anæsthetic. This allays thirst and lessens the tendency to vomiting. Aspirin, gr.xv.—xxx. dissolved in a little boiling water is added to the enema to ease pain and prolong sleep. Water, or weak barley-water is given after three hours if the patient is thirsty. Flatulence is avoided as far as possible, therefore morphia is not given for the relief of pain or sleeplessness. Aspirin or aspirin and bromide, or bromide, or medinal, or Heroin, gr. 1/12, are given instead if necessary.

Retention of urine is avoided by encouraging the patient to pass urine before the bladder gets over distended. A full bladder is a potent cause of flatulence. A turpentine enema is given if flatulence is troublesome. Light farinaceous diet is adopted until the third day; on the third morning a dose of castor oil is given. The patient sits up in a chair to tea on the fifth day, and stays up about an hour. Every day he stays up a little longer and does a little more walking to keep his legs from wasting. Pulmonary embolism is very unlikely with this method. He is also encouraged to take deep breaths and to bend and straighten his body.

On the sixth or seventh day the stitches are removed, and the next day the patient has a bath. Every day a little more exercise is taken short of fatigue. As a rule the patient is able to go home within a fortnight of the operation and is usually quite fit in a month. No belt or other support is necessary after a fortnight, for the valvular wound cannot give way. After a vertical wound the patient has to stay in bed longer and gets bored with life and out of condition. Often he has to wear an abdominal belt for weeks or months.

The figures are some of those illustrating vol. ii. of Jacobson's Operations of Surgery, and are reproduced by the kind permission of Messrs. J. & A. Churchill.

War Epilepsy.

CLINICAL LECTURE BY DR. A. F. HURST.

TRUE epilepsy may develop as a result of the strain of active service, but I have only seen two undoubted cases, in which the individual was not predisposed by having previously suffered from some form of major or minor epilepsy or by having a family history of epilepsy, except when an actual head injury was the exciting cause. In one of the exceptions the patient was an only child and his parents both died before he was ten years old, so that the absence of a family history was of comparatively small importance, as it is common to find that two or more brothers or sisters are the only other epileptics in a family. The other exception was a soldier who was taken prisoner during the retreat from Mons and developed severe epilepsy after nine months of ill-treatment and semi-starvation in Germany. This case was associated with hypothyroidism, and the fits continued to occur with great frequency in spite of large doses of bromide, until he was given gr. 3 of dried thyroid a day in April, 1917, a year after his return from Germany, and six months after he had been discharged from the service. The thyroid alone greatly reduced the number of fits, and when bromide was also given they ceased entirely. Numerous apparent exceptions occur, but on further investigation these prove to be cases of hysteria or commencing general paralysis.

Many men who have inherited a predisposition to epilepsy, but have never suffered from it, or who have had no fits since early childhood, suffer from epilepsy when exposed to the simple strain of active service, even if they are never within range of shell-fire, the change from a protected life to one of greater excitement being sufficient to light up the latent disease. Sometimes an acute infection may be the existing cause.

Epilepsy following malaria.—Pte. W., aged 20, has had fits at long intervals since he was 15, but he had had none for a year when he joined the army in July, 1915. He continued to be free from fits until he contracted malaria in Salonica in September, 1916. They then became frequent, and have since returned with each recurrence of malaria. Since he reached England in March, 1917, he has had very few fits except during the night following an attack of malaria. When the latter had been cured by subcutaneous injections of quinine the fits became less frequent and were finally completely controlled by bromide.

In other cases actual shell-shock has occurred, but unless there is a head-wound, this also only gives rise to epilepsy in the predisposed.

Epilepsy resulting from shell shock.—Pte. R., aged 24, had been in the army since he was 16. He had never suffered from fits, but had an epileptic sister. He went to the front in September, 1914, and has been wounded four times. He was never worried by the shell fire, and enjoyed the life at first, but he gradually became depressed after the death of his father and five brothers on active service. He was blown up and buried three times in one day in July, 1916. He was unconscious for two hours on the second occasion, but carried on after resting another couple of hours until he was blown up again. He then became shaky and nervous for the first time and slept badly. A month later he had a typical attack of major epilepsy. Fits now recurred with increasing frequency, and he has had as many as nineteen in one day. Rest and bromide led to their gradual cessation, and he had had no fit for six weeks when discharged from hospital.

The resisting power of this man was remarkable, as it was only after two years of fighting and after he had been wounded four times that severe family worry and repeated shell shock led to the development of nervous symptoms, and it is probable that even then nothing more would have occurred had he not, like his sister, inherited a predisposition to epilepsy.

Even in severe lesions involving the membranes or the brain itself, epilepsy is not likely to develop, except when a man is predisposed by a family history of fits or a history of fits in childhood, but in such individuals it may sometimes develop even with comparatively

slight injuries. As, however, nobody can be regarded as completely immune, every man who has received a head injury, however trivial it may be, and whether an operation has been performed or not, should be given bromide regularly for at least a year. If he is specially predisposed, the bromide should be continued for two years. The initial dose should be 30 grains a day, which can gradually be reduced to 10 grains. If, in spite of this, fits develop, the question of operation requires consideration. None should be performed if the wound has healed and left a healthy scar and no foreign body can be detected with the X-rays. But if fragments of metal or bone are lying superficially and easily accessible, they should be removed, whether the wound has healed or not. Deeply situated fragments should be left, as more harm than good would result from the injury to the brain caused by the operation. An exception to this rule is the presence of aseptic encephalitis, which gives rise to headache, vomiting, optic neuritis, and focal symptoms, often only after the patient has returned to a life of activity. This rare condition is a definite indication for operation. As an operation for epilepsy does not itself cure, but only improves the chances of cure, treatment with bromide is as important after as before its performance.

A soldier, who has suffered from true epilepsy, whether traumatic in origin or not, is unfit for service abroad; the strain of active service is likely to increase the frequency of the fits, and there is considerable danger that post-epileptic automatism may occur, in which case serious results may follow both to the man himself and to his companions. On the other hand, men suffering from infrequent fits can often be employed with perfect safety in various capacities in the army at home, as regular mental and physical employment, especially out of doors, is of the greatest value to them. They should, of course, continue to take bromide, as in civil life, until they have had no fit for three years.

In my experience automatism and amnesia have been exceptionally frequent manifestations of epilepsy in soldiers. Many men, who had previously only suffered from ordinary major epilepsy or the common types of petit mal, and often only at rare intervals or not at all since childhood, have been found wandering far from their units and have been unable to give any account of themselves for several hours or even days. In such cases they run grave risk of being punished for deserting, unless the true nature of their condition is recognised. At the time it is generally impossible to ascertain whether their automatism and amnesia are due to epilepsy, as there are several other causes of these conditions, such as simple concussion or the concussion of true shell-shock, extreme nervous exhaustion, heat-stroke and even migraine. But when the patient's memory returns, a personal or family history of fits is strong evidence in favour of the epileptic origin of the amnesia. In some cases an accurate history has only been obtained after communicating with the soldier's relatives.

Automatism in a man with a personal and family history of epilepsy.—Pte. B., aged 29, was strange in his manner when last with his regiment at 7 a.m. on November 10th. The next day he was found by the police at a seaport many miles away without his equipment. He could give no account of his recent doings, and did not know what day it was. He gradually regained his memory during the following week. He then stated that from the age of 12 he had been subject to fits, which were preceded by an aura and were often accompanied by involuntary micturition and occasionally by defæcation. He had had none for several months when he enlisted in February, 1916, and had remained well until the present attack. With this history there could be little doubt that the attack of automatism and amnesia was post-epileptic. He was ecommended for employment at home.

Automatism in a man with a personal and family history of epilepsy.—Pte. D., aged 26, suffered from

epilepsy from the age of 11 until he was 18, and his mother had had similar attacks. He joined the army when 20; his medical history sheet showed that he had attempted to commit suicide in 1912, but he had no recollection of this. In August, 1914, he went to France with the Expeditionary Force. He was free from recurrence in spite of the fatigue and menta strain of the retreat from Mons and much subsequent fighting. In the beginning of Sept., 1916, he was put in charge of eight men doing guard, and he only went to bed on alternate nights; he had to look after the telephone, and the work worried him greatly, as he had never before been in a responsible position. After being employed in this way for two months, he was found one evening arresting civilians without cause and driving them before him with fixed bayonet. He was court-martialled, but was let off on the medical evidence, and sent to hospital, where he remained confused and suspicious. On 16th November he was seen by a medical officer in a typical attack of petit mal lasting a few seconds. On reaching England on December 19th he had no recollection of these events, nor of having attempted suicide four years ago. He was feeling quite well and was keen to return to duty. There is little doubt that this attack and possibly his attempt to commit suicide four years before were due to post-epileptic automatism.

Diagnosis from hysteria.—The diagnosis of hysterical from true epileptic fits has generally to be made from the history of the attacks. Involuntary micturition, the much less frequent involuntary defæcation, and a visible injury to the tongue caused by biting are the only definite criteria pointing to true epilepsy, which can be obtained from the patient himself. If his companions say that he has struggled with them or clutched at objects near him, the fits are certainly hysterical, but in many cases it is impossible to communicate with those who saw him in a fit. Even when the Medical Officer is fortunate enough to be present during one, it is much less easy to come to a definite conclusion than is generally supposed. I have seen several cases in which a diagnosis of true epilepsy made under these circumstances has been proved by subsequent events to be erroneous, and on a number of occasions I have myself been doubtful, although I was present during the great part of the fit. The only signs which can, I believe, be regarded as conclusive evidence against hysteria are definite cyanosis, complete loss of the conjunctival and corneal reflex, loss of the pupillar reaction to light, and, most conclusive of all, an extensor plantar reflex. The plantar reflex should be tested in every case as soon as the convulsions have ceased and before consciousness has returned. Unfortunately a flexor reflex does not definitely exclude true epilepsy, though an extensor reflex is much more commonly present. In all cases of doubt, when there is no personal or family history of epilepsy, and when one has to rely entirely on the patient's unsupported statements, I have tried to induce an attack by suggestion under hypnosis. In hysteria a fit is produced at once, its character can be studied at leisure, and it can be made to last as long as desired. The few suspicious cases in which I failed to induce a fit by suggestion proved on further investigation to be genuinely epileptic. I do not think that a true epileptic fit could be produced in this way, and I have certainly seen no case in which a fit produced by suggestion was not definitely hysterical and in which the plantar reflex was not flexor. I always combine this method of diagnosis with treatment, by telling the patient before, during, and after the fit that this one will be the last he will ever have. The treatment has proved most successful, as several men, who had been having numerous fits every day in spite of large doses of bromide, have had no more after their hysterical nature has been proved and their repetition contra-suggested in this way, though the bromide has been discontinued. On one occasion I wished to demonstrate the production of a hysterical fit in a man, who had already been told under hypnosis that he would have no more. Although the first fit had been produced with the greatest ease, the suggestion of cure had been so successful that

all attempts to produce fits during hypnosis now failed completely. On one occasion I was unable to produce a fit by suggestion, but the hysterical nature of the patient's convulsions was proved by the fact that they completely ceased after this suggestion of cure which I had made during hypnosis.

Etiology of hysterical fits.—Sudden terror occasionally gives rise to hysterical convulsions. I have observed this most frequently when some special incident at the moment or in the individual's past history has suggested convulsions to him.

Hysterical fits resulting from emotion.—An officer and his servant were blown up by a shell. The servant did not lose consciousness, and ran to fetch a stretcher. On his return the officer, to whom he was greatly attached, made a few convulsive movements and then died. The servant immediately had a fit, and in the following two months he had eleven more, They ceased completely after I had explained their origin and nature to him.

The idea of convulsions may be already present in the man's mind if he has previously suffered from true epilepsy, or if he has been the witness of convulsions in some near relation; horror or fright may then suggest an attack. Such a history may arouse the suspicion that the fits were genuinely epileptic and not the result of suggestion, as strong emotions may be the exciting cause of a genuine fit in epileptics. But if a description of the fit is obtainable or if subsequent spontaneous or induced attacks are witnessed, their hysterical nature becomes clear.

Hysterical fits in a man who had had convulsions as a child.—A New Zealand soldier was rendered unconscious for a few minutes as a result of concussion due to a high explosive shell. He had had a few fits after falling on his head when eight years old, and the recollection of this probably led by a process of auto-suggestion to the occurrence of hysterical convulsions at least once and generally several times a day. I saw him with Captain A. M. Crabtree, who subsequently hypnotised him and suggested recovery, with the result that the fits immediately ceased and have not recurred.

I have seen one case in which true epileptic fits, with extensor plantar reflex, cyanosis, and involuntary micturition, were associated with typical hysterical fits. One of the latter was induced under hypnosis; a cure was suggested at the same time with the result that no more fits occurred, the true epilepsy being controlled by bromide. In rare cases there is no apparent reasons why convulsions rather than some other hysterical symptom should develop.

Hysterical fits in a "martial misfit."—Private R., aged 27, a typical "martial misfit," who had been a music hall falsetto singer and subsequently a valet in private life, joined the Army in July, 1915. There was no family history of epilepsy and he had never had a fit himself. Soon afterwards he was sent to France, where he worked in a canteen. A week later some men broke in at night and a mallet was thrown at him; although he was not hit he immediately had a fit and remained dazed, dumb and unable to walk for two days. After this he slept badly, had occasional fits and remained very nervous. He was sent home for "debility" in September, 1916, and was discharged to duty in December. He had six fits in the first week after returning to France, three in hospital there, two on the boat, and between two and four on each of the first four days after admission.

He had never passed urine or bitten his tongue in a fit, but the description sounded like true epilepsy, and this was the diagnosis made by a M.O. in France, who had seen him have one. As I had not then seen a single case of epilepsy resulting from the war without actual injury or a personal or family history of the disease, I doubted the diagnosis. I therefore hypnotised him and suggested he would have a fit; he at once had one, and though very similar to true epilepsy, the plantar reflexes remained flexor instead of extensor. I told him this would be his last fit, and he has had no more except on February 16th and 17th, when I talked to him about returning to duty. This is in striking contrast to the absence of any improvement with bromide, which he had had in France and during the first four days after admission.

Soon after admission he developed a gait and a speech defect, which were copied from a man with hysterical paraplegia and another recovering from hysterical mutism in the same ward. These symptoms were genuinely due to auto-suggestion and not malingering, and disappeared with vigorous persuasion.

When a soldier develops epilepsy, and no history of previous attacks is obtainable, a careful examination should be made for early physical signs of general paralysis, and even when they are absent the Wassermann reaction of the blood and cerebro-spinal fluid should

be tested, and an examination of the cells contained in the latter should be made. I have discovered several cases of commencing general paralysis in this way, and vigorous treatment with mercury, iodide, and injections of salvarsan has proved unexpectedly successful in preventing the recurrence of fits and in improving the mental and physical condition of the patients when these were also affected.

Syphilitic epilepsy.—Private B., aged 27, had syphilis ten years ago. On March 21st, 1917, he had a typical epileptic fit. He had been two years in France, but had not been under fire. He had never previously suffered from fits and none of his relations were epileptic. For some time he had had occasional visual hallucinations, but was otherwise normal mentally. There were no physicial signs of disease except a fine tremor of the hands, which disappeared after a short rest. Both the blood and cerebro-spinal fluid gave a positive Wassermann reaction.

In rare cases soldiers sham fits. As the convulsions, like those of hysteria, have simply the character which the individual himself regards as most natural, fits due to malingering and hysteria are clinically quite undistinguishable. It is, therefore, only the special circumstances of the case which may lead to a suspicion of malingering, and definite proof is not obtained except in rare instances, such as in the following case in which the man admitted he was shamming.

Malingering of epilepsy by an unwilling conscript.—A.C., an unwilling conscript, had numerous fits for the first time in his life on board ship coming from Jersey three days after enlisting, and had fifty more in the two days he was in hospital at Southampton. He was then sent to Netley. As the history suggested that the fits were either hysterical or more probably due to malingering, I hypnotised him, and suggested a fit, but nothing happened. I then said to the Sister in the patient's hearing, that it was quite clear he was shamming, as in all genuine cases fits resulted with this treatment. He immediately had a fit with marked opisthotonos, which was abruptly terminated when I ordered him to stop and wake up. I then told him I was quite sure he was malingering, and that he would be wise to admit it. He did so at once, and promised that he would not have any more.

Notice.

Kinematograph Demonstration by Dr. Hurst

Dr. A. F. Hurst is giving a Kinematograph Demonstration of War Neuroses at 107, Wardour Street, W., at 2 p.m., on Wednesday, June 6th, instead of a Clinical Lecture at Guy's.

Guy's Hospital Ladies' Association.

THE annual meeting of Guy's Hospital Ladies' Association was held in the Court Room on Monday, May 14th. Lady Goschen presided, and about one hundred members were present.

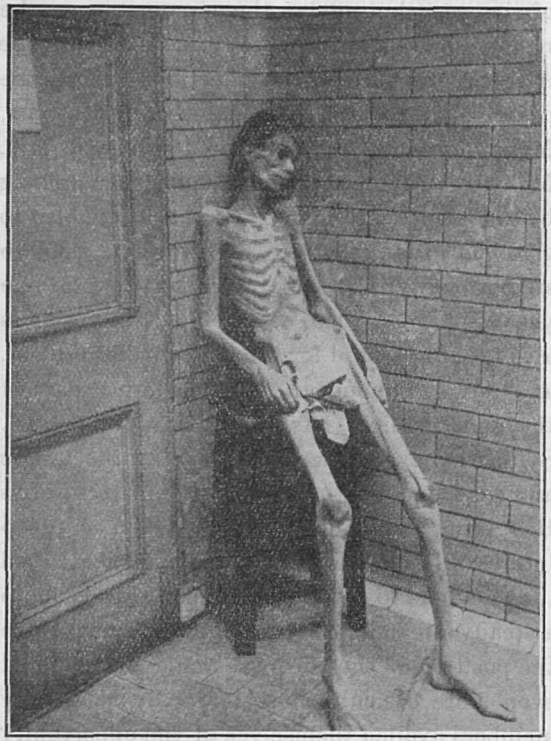
From the report it appears that the work has suffered somewhat owing to the many demands of the war, but under the circumstances the results may be regarded as satisfactory. The Association has sustained a serious loss in the death of three of the local secretaries, viz., Mrs. Charles Barclay, Miss Dunn and Mrs. Mollison. The Association is again economizing by not printing a report, and is thus enabled to give the usual grants to the Hospital, £300 to support six beds in the Maternity Ward for one year, and £50 for two cots. The Association is also forming a fund for the endowment of a cot, and it was announced that the larger part of the sum required has been already collected. Sympathetic reference was made to the illness and consequent retirement of the matron, Miss Haughton, who had always taken a deep interest in the work. Lady Goschen also urged the members to do all in their power to keep up a steady stream of contributions, without which the position of the Hospital would be rendered even more difficult than it already is. Many members availed themselves of the opportunity afforded to visit the Hospital under the guidance of Sisters who kindly volunteered their services.

Publications received.

The New York State Journal of Medicine, The Hospital, The Prescriber, St. Mary's Hospital Gazette, The Nursing Times, St. Bartholomew's Hospital Journal. A Naval Medical Officer's Impression of a Visit to the Trenches, by Fleet-Surgeon C. Marsh Beadnell, R.N.

A Case of Anorexia Nervosa.

F. T,, aged 18½, clerk. Admitted Jan. 31st, 1917, into Addison ward, under Dr. Shaw. Thirteen months before admission the patient suffered discomfort after meals and began to experience severe constipation. For a time he felt a craving for food, which he decided to hold in check and to take only the diet he considered correct. He stated that at first he



took an ordinary mixed diet, which was, however, small in amount; gradually the amount of food eaten was diminished, and on several occasions his mother discovered him hiding food which he tried to pretend he had eaten. In November increased weakness forced him to stay away from his work. About the same time he started on a still more reduced diet consisting of practically nothing but tea and bread and butter. Some of this even he subsequently admitted having hidden His constipation persisted, and sometimes his bowels were only opened once a week. He became gradually weaker and suffered from progressive emaciation. During the month before admission his mother stated that he became morose and disinclined to speak.

On admission his temperature was below 95° and his weight only 4½ stones. He was greatly emaciated, with all the bony prominences very obvious He answered questions intelligently, though sometimes with hesitation. He stated that he could eat and enjoy a full meal without any fear of discomfort following, but he felt he could not bring himself to eat. The only symptom which appeared to cause him any anxiety was his constipation. Nothing abnormal was found on examination of the various systems. While in the ward his temperature remained persistently low and his bowels were opened only by enemata or purgatives; he became gradually weaker and more depressed. Eventually he attempted suicide by setting fire to his hair with an oil lamp. This was, however, unsuccessful, and caused only slight burns. He was then removed to the Strong Room, where he gradually got weaker and died on February 14th.

Dr. Shaw diagnosed the case as one of Anorexia Nervosa. It was not possible to perform a post-mortem examination.

C. G. COOMBS.

Roll of Honour.

Died of Wounds.

Capt. C. A. R. Gatley, attached to the Buffs.
2nd Lieut. W. A. Sandoe, 9th Devonshire Regiment.

Deaths amongst Sons of Guy's Men.

Lieut. Douglas Laidlaw Purves, East Lancashire Regiment, youngest son of Dr. Laidlaw Purves, of London, killed April 28th.

Chapel Report, 1916.

THE Chapel has suffered no less than the rest of the Hospital by the retirement of Miss L. V. Haughton from the post of Matron. She was always ready to advise and encourage, and her interest in the spiritual part of the hospital work was real and unaffected.

We have also lost Mr. Langdale, who had been Assistant Acting Chaplain since May, 1914. He resigned in October, 1916, in order to take up parish work in Bethnal Green. No one could have been more thorough in any work that he undertook, and his departure was universally regretted. The Bishop appointed the Rev. C. C. Thacker to succeed him.

The Chapel has been cleaned during the year, and the vestry thrown back a few inches to make room for the mosaic panel, the last of the eight ordered from Messrs. Powell, of Whitefriars, which has been placed in position at the increased cost of £60. Messrs. Powell were also consulted about the improvement of the sanctuary, and reported that a new altar of the same width as the reredos must be the first step in any scheme of decoration.

Three services were held in the autumn in connection with the National Mission. The Rev. G. Branson was sent as Bishop's messenger, and preached at each service. The Bishop preached on Ash Wednesday, and the other preachers in Lent were the Revs. E. E. Crawford, H. P. Statham, A. E. Oldroyd, and the Ven. Archdeacon Holmes.

The white altar cloth, stoles, and the white and purple book markers have been cleaned and renovated. Miss B. Huggett kindly advised as to the best method to be adopted. New white alms bags have also been worked and given to the Chapel and to Bright ward.

We have to acknowledge with many thanks various other gifts. A fair linen cloth was presented anonymously by one donor. a beautifully worked white silk chalice veil and burse by another, and some of the ward maids who were confirmed during the year gave a set o three white book markers. A large fair linen cloth and two small ones have been bought; the crochet ends of these were also gifts.

CHAPEL FUND ACCOUNT.

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED DEC. 31ST, 1916.

1916	*Receipts.*			£	s.	d.
Jan. 1.	To Balance brought forward from 1915 Account			48	8	7
„	Offertories, &c.:—					
	Chapel	46	2 1			
	Bright Ward ...	7	14 11			
	Donation for Easter Flowers	1	10 0			
	Box Contributions, &c. ...	1	15 11			
				57	2	11
				£105	11	6

1916	*Payments.*			£	s.	d.
Jan. 1.	By General Account:—					
	Floral Decorations, &c....	16	9 6			
	Books, Printing, Music, &c.	4	6 0			
	Furnishing and Sundry Expenses ...	6	19 3			
	Bank Cheques ...	0	8 4			
				28	3	1
„	Special Offertories:—					
	Maternity Samaritan Fund ...	7	1 1			
	South London Church Fund ...	4	3 2			
	Metropolitan Hosp. Sunday Fund ...	2	11 9			
				13	16	0
„	Decoration Account:—					
	Panel (Messrs. Jas. Powell and Son)			60	0	0
				101	19	1
„	Balance carried forward:—					
	Cash at Bankers			3	12	5
				£105	11	6

Audited and found correct,
Jan. 10th, 1917. W. J. CURRY.

Appointments.

R.N.M.S.

The following appointments have been made:—
Fleet-Surgeon R. F. Clark to the *Vivid*.
To be temporary Surgeon:—M. Pearson.
Temporary Surgeon F. G. Lloyd to the *Victory*.

R.A.M.C.

Temporary Major to be temporary Lieut.-Colonel:—H. W. Bruce, Southwark Military Hospital.

To be temporary Lieuts.:—F. M. Longson, G. Maxted, H. J. Henderson, P. R. Chevreau, G. Birch, W. L. Stuart, G. H. Drake, L.D.S. (R.G.A.), H. C. Malleson, A. Fraser, J. H. Clatworthy, F. R. L. Atkins, R. Larkin. T. S. Sharpley.

R.A.M.C. (Territorial).

Lieuts. to be Captains:—W. C. D. Maile, G. Thomson,

Capt. T. E. Roberts has relinquished his commission on account of ill-health caused by wounds, and has been granted the honorary rank of Captain.

I.M.S.

H. S. Wacher has been appointed temp. Lieutenant.

Army Dental Corps.

Temporary Capt. W. R. Greene has been appointed temporary Major.

Civil.

I. Tewfik, M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to St. Bartholomew's Hospital, Rochester.

Charles E. Hicks, M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator to the Godmanchester District of the Huntingdon Union.

P. A. S. Dyson, L.R.C.P., M.R.C.S. Eng., to be Certifying Surgeon under the Factory and Workshops Act, Grosmont District of the County of Yorks., N. Riding.

Papers by Guy's Men.

W. Burridge (from the Physiological Laboratory, Oxford): Some actions of anæsthetics analysed by the observation of altered cardiac relations to calcium.—*The Quarterly Journal of Medicine*, April, 1917.

W. Burridge (from the Physiological Laboratory, Oxford): Researches on the perfused heart. An action of strychnine, etc., with some remarks on tetanus.—*Ibid.*

W. Burridge (from the Physiological Laboratory, Oxford): Researches on the perfused heart. Some actions of adrenin, together with some remarks on Addison's disease.—*Ibid.*

Philip Turner, M.S.Lond., F.R.C.S. Eng.: The treatment of varicocele by excision.—*Lancet*, May 19th, 1917.

A. Ralph Thompson, Ch.M. Manch., F.R.C.S. Eng.: Primary suture and union of operation wounds of the urinary bladder.—*Ibid*, May 26th, 1917.

Pass List.

Society of Apothecaries of London.

At the recent Examination, E. F. Deacon passed in the undermentioned subjects:—

Surgery (Section I.)—Medicine and Midwifery.

Attendance at Lectures.

The following letter has been received by the Dean of the Medical School:—

Dear Sir,—I have now to inform you that the Royal Colleges of Physicians and Surgeons have decided not to enforce for the present attendances on systematic courses of lectures on the following subjects, namely:—

Anatomy, Physiology, Medicine, Surgery, Midwifery, Pathology, Pharmacology and Therapeutics, Forensic Medicine including Insanity, and Public Health.—I am, dear Sir, yours faithfully,

FREDERIC G. HALLETT,
Secretary.

The Dean,
Guy's Hospital, S.E.

Change of Address.

G. E. Genge-Andrewes, M.B., B.S., 332nd Field Ambulance, Smallburgh, Norfolk.

F. Kay Holman, M.R.C.S., L.R.C.P., from "Galveston," 60, Eton Avenue, N.W., to 76, Avenue Road, N.W. 8.

I. Tewfik, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital, Rochester.

Lieut. H. Henderson, M.B. Lond., R.A.M.C. (T.C.), 12th Field Ambulance, B.E.F.

A. H. Taymour, M.R.C.S., L.R.C.P., from Guy's Hospital to 2nd London General Hospital, Chelsea, S.W.

Capt. G. Covell, I.M.S., from East Africa to 1, Gloucester Road, Finsbury Park, London, N.

Major Wilson Tyson, R.A.M.C. (T.), from 1st Eastern General Hospital, to 55 General Hospital, Boulogne Base, B.E.F.

Capt. V. E. Lloyd, R.A.M.C., 67 H.A. Group, B.E.F., France.

Honours.

Military Cross.

Capt. Stanley Sextus Barrymore Harrison, R.A.M.C., attached to the South Staffordshire Regiment.

For conspicuous gallantry and devotion to duty. He worked continuously for ten hours under very heavy fire and was responsible for saving many lives. He displayed great courage and determination throughout. He has on many previous occasions done fine work.

Wounded.

Capt. C. F. Searle, R.A.M.C., attached to Northampton Regiment.

Capt. J. L. Stewart, M.C., R.A.M.C.

Death

WHITWORTH.—At St. Agnes, Cornwall, on May 14th, William Whitworth, M.R.C.S. Eng., L.S.A., aged 63.

J. J. C.

GUY'S HOSPITAL GAZETTE.

VOL. XXXI., No. 755.] JUNE 16, 1917. [SIXPENCE.

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Passim.

WE were pleased to see in the Honours List published recently that the great services rendered to Medicine by Dr. Frederick Taylor have been rewarded by a Baronetcy. We only regret that Mrs. Frederick Taylor did not live to see the honour conferred on her husband.

WE regret to hear of the death of Mr. Walter Stanford, who was one of the oldest servants of the Gazette. As advertising canvasser for nearly thirty years he did a great deal to help the business side of the Gazette, and had only given up his work owing to ill-health a few months ago.

THERE was a fair attendance at the kinema demonstration of War Neuroses given by Major Hurst at the Pathé Co.'s rooms in Wardour Street on June 6th. The films were taken under the authority of the Medical Research Committee with the idea that they should form a permanent record of some of the extraordinary gaits and tics met with in subjects of shell-shock.

WE are glad to be able to announce that our notice in last Gazette of the death from wounds of Capt. C. A. R. Gatley was a mistake. We offer our apologies for the inconvenience and annoyance we may have caused, and hope that Capt. Gatley will make a rapid and uninterrupted recovery.

WE hear that in the near future the Hospital is likely to lose the services of more members of its already depleted staff. If this prove true we fear that there will be difficulties in maintaining the Out-Patient Clinics.

A WELL-KNOWN consulting physician when asked by Sir Alfred Keogh his opinion on the R.A.M.C. is reported to have replied that he supposed the organisation was very fine, but as far as he could see most of the doctors were in France and most of the patients in England, and in consequence they did not meet very often.

WE have just heard of a case that is reminiscent of Mons. An officer with a perforating wound of stomach, liver, and chest, was recently evacuated from a C.C.S. by a fourteen hour journey in a cattle truck, and this, too, only twelve days after the date of receiving his wounds.

WE have much pleasure in congratulating Mr. A. Bulleid on being awarded the Treasurer's

Gold Medical for Clinical Medicine. Mr. Bulleid is at present Assistant House Physician to Dr. Beddard.

IN spite of the risk of finding ourselves incarcerated in some dungeon under the Defence of the Realm Act we cannot help referring to the air raid of June 13th. The Hospital received a certain number of the victims. In the opinion of many whose duties necessitated their presence in the Surgery considerable reforms might be made in the arrangements for dealing with such situations. It would appear that the enthusiasm of many students in the earlier years of their medical curriculum led them to present themselves as additional helpers in the Surgery. This led to considerable congestion. As there is no reason for hoping that we have seen the last of daylight air raids, it is not too late to make arrangements whereby a sufficient but not excessive number of dressers should be on duty in the Surgery, while others might be told off for work in the various operating theatres. The services of first and second year students could be made use of as porters.

CONSIDERABLE anxiety and in some cases indignation is being caused by rumours that part of the "Park" is to be sacrificed and destroyed in order that incompetent motor-drivers may have more scope for ther evolutions outside Hunt's House. These rumours are, we fear, confirmed by the appearance of a maze of whitewashed lines which presumably mark the course of new circular tracks. If what appears to be the plan adopted is carried out nearly 2,000 square feet of the best grass under the trees will be destroyed, and the amenities of the "Park" seriously interfered with.

It is difficult to understand what the object of the scheme is, unless it be that the Works Department are finding themselves unemployed. For nearly three years now motor ambulances have succeeded in either turning in the present roadway outside the entrance of the Medical Wards, or in backing down to the crossing by the colonnade steps. Further, the present scheme, as depicted by the lines traced in the "Park," offers no help to the heavy vehicles which occasionally have to unload at the Dispensary, and many of the longer wheel-base cars now used as ambulances will be unable to take the sharp bend without reversing.

If it be justifiable to carry out in war time any work so apparently unnecessary, we humbly suggest that a small bay should be made on the site of the present path to the Medical School, by means of which any vehicle, great or small, could be turned with a single reverse.

Appointments.

R.N.M.S.

The following appointments have been made:—

Fleet-Surgeon R. W. B. Hall to the *Dolphin*.

Staff-Surgeon Q. H. Richardson, to R.M. Division, Deal, vice Loughlin.

Surgeon F. A. Knott to the *Pembroke*, additional for Chatham.

R.A.M.C.

Major F. J. Steward to be temp. Colonel.

Major W. Hind to be temp. Colonel.

Temp. Captains to be temp. Majors:—W. Tyson, F. D. S. Jackson.

Temp. Lieuts. to be temp. Captains:—H. Joslen, A. Davidson.

To be Lieuts.—H. N. Pritchett, W. J. Walters, S. Vidot, O. St. L. Campion, L. Gill.

Temp. Hon. Lieut.-Col. C. H. Fagge, Major R.A.M.C. (T.F.), having resigned his appointment, relinquishes his temporary commission.

Capt. S. Hughes relinquishes commission on account of ill-health, and is granted the rank of Captain.

Temp. Lieut. F. R. Leblanc (S.R.) is detailed for early embarkation for Mesopotamia.

Lieut. G. Maxted, M.D., F.R.C.S., Ophthalmic Surgeon to the 50th General Hospital, Salonika.

Civil.

P. A. S. Dyson, M.R.C.S., L.R.C.P., has been appointed Certifying Factory Surgeon for the Grosvenor District, Co. Yorks.

Lest We Forget.

"Our Second Birthday"—Twenty-one Years Ago.

Any of our readers who look up the "Guy's Hospital Gazette" published on June 10, 1896, will be rewarded for their trouble by finding a literary production on a scale far beyond that of an ordinary "Gazette." The "Festival Number" then published signalised an epoch in the history of Guy's Hospital, for from that year dates the sound basis on which the Hospital finances rest.

During the twenty years before 1896 the revenues of the Hospital, which had under the terms of the Founder's will been all invested in land, had steadily depreciated. The annual expenditure was £40,000 while the available revenue was only half that sum. Over 100 beds had been closed and the Governors were faced with the prospect of having to close down still more wards unless some drastic steps were taken to deal with the financial problem.

By the year 1895 it had become certain that the depreciation in the value of land was a factor which had to be regarded as permanent, and that if Guy's was to be enabled to continue its good work, steps would have to be taken to obtain a further source of permanent income beyond the existing endowments. After careful consideration the Governors decided to start a big campaign in order to re-endow the Hospital. The amount required for the Re-Endowment Fund was put at half a million sterling.

The campaign during 1896 met with a greater success than even the most optimistic could have hoped. A Festival Banquet and Reception was held on June 10th, 1896, at the Imperial Institute, at which the late King Edward VII., then the Prince of Wales, took the chair. The assembly was one of the largest and most brilliant ever gathered together. Through the hard work and enthusiasm of Sir Alfred Fripp and Sir Cooper Perry there were present representatives of every branch of English life. Among the guests were all the leaders of social life, of the Church, of politics, and of business and commerce.

At the suggestion of the Prince of Wales a novel and praiseworthy innovation was made in the arrangement of the Banqueting Hall. Instead of grouping the guests round a number of long tables, they were seated at sixty small ones, each accommodating eight persons, distributed at proper intervals in the great dining pavilion. The only exception was the Prince of Wales' table at which sat twenty-one distinguished men. Among these were the Rt. Hon. A. J. Balfour, Mr. Howse (who was at the time Senior Surgeon to the Hospital), Sir Harry Keppel, Lord Roberts, the Bishop of Winchester, Mr. E. H. Lushington (Treasurer of the Hospital), Dr. Pye-Smith, Sir Samuel Wilks, and the two organisers of the Festival, Sir Alfred Fripp and Sir Cooper Perry.

In a notable speech the Prince of Wales, after explaining the financial difficulties in which Guy's found itself, paid a handsome tribute to the good work done by the Hospital and Medical School, and appealed for contributions to the newly-started Re-Endowment Fund.

After the dinner and speeches a reception was held at which in spite of the extremely bad weather conditions between six and seven thousand persons were present. Among other attractions was a display of motor cars, which were being exhibited under the auspices of the Motor Car Club. At that period the movement was still in its infancy, and the Act, which insisted on every self-propelled vehicle being preceded by a man on foot carrying a red flag, was still unrepealed. Rides round the quadrangle of the Institute were being given by Lady Tweedmouth at a pound a journey. Another novelty which aroused much interest was an X-ray demonstration. The Prince of Wales allowed a skiagram of his hand to be taken, and prints were sold at half a guinea each. It was only a few years since the first discovery of X-rays, and at the period of the Banquet their application in surgical cases was just beginning to come into vogue.

Though the Festival Banquet, with the presence of the Prince of Wales as Chairman, represented the culmination of the campaign for the Re-Endowment Fund, yet, in a sense, it only marked the end of the first phase in the Hospital's great appeal. That great gathering is still indeed bearing fruit. It brought before the public through the press the Hospital's need of support, and there can be no doubt that the steady stream of legacies which have been flowing in during the last 21 years owe their origin in a majority of cases to the great Festival Banquet at the Imperial Institute, but we may surely pride ourselves that the stream would hardly have been maintained had not the Hospital and its Staff continued to earn universal gratitude and goodwill.

To turn for a moment to the achievements of the great appeal, we find that at the date of the Banquet the Re-Endowment Fund had received in response to the Prince of Wales' Appeal £158,000. During the Banquet itself a further £8,524 was subscribed. Since then the Fund has steadily grown, and on December 31st, 1916, it amounted to £361,600. Of this sum very nearly £100,000 is invested in War Loan, Exchequer Bonds, and Treasury Bills. Though as yet the sum of half a million pounds appealed for at the Banquet has not been reached, the rise in the rate of interest during the past 21 years has brought the total of dividends from the Re-Endowment Fund to £13,600.

But quite apart from the Re-Endowment Fund, the year 1896 marks an epoch in the finances of all London Hospitals. Under the patronage of King Edward VII., the King Edward's Hospital Fund for London was established. This has formed a great financial reserve fund whence all hospitals in London may receive contributions. During the year 1916 Guy's received £7,000 from this Fund towards its ordinary expenditure.

But the King Edward's Hospital Fund has done more than provide contributions towards expenses of London hospitals. It has insisted that those institutions which receive benefits from the Fund shall in return have to comply with certain conditions. Hospitals which receive grants are visited and inspected by trustees of the Fund, and improvements may be suggested. No new scheme for additional accommodation may be decided on until it is approved by the Fund. Strict accounts must be kept of income and expenditure in a form approved by the Trustees of the Fund. The effects of the King Edward's Fund have, therefore, made it certain that those hospitals which receive grants, and this includes practically all London hospitals, are conducted in an economical and efficient manner.

Many of the younger generation at Guy's may not realize how much the Re-Endowment Fund has done for the Hospital. But for the big effort of 1896 many of our wards might have been closed, with disastrous results for the rapidly increasing population of the Boro' and for the Medical School. The certainty of a fixed income from the Fund has enabled the Hospital to provide itself with adequate accommodation for the pathological, chemical, and bacteriological work which is necessary for a modern hospital. Further, many of the Funds to provide Lectureships and Prizes owe their origin to the revival of interest in the Hospital which began at the Banquet in 1896.

Besides the hard work performed by Sir Alfred Fripp and Sir Cooper Perry in insuring the succesful initiation of the Re-Endowment Fund at the Festival Banquet, many others, both Guy's Staff and others, did a great deal by their zeal to promote the good cause. Sir Samuel Wilks was able to hand over to the Fund, £26,500 collected and subscribed by the Medical and Surgical Staff and Past and Present Students of the Medical School. Mr. Wells who, after being Clerk to the Dean of the Medical School for many years with great success, took over the duties of Secretary to the Treasurer, was also indefatigable in his efforts to get subscriptions to the Fund.

We have already briefly referred to the present state of the Re-Endowment Fund on its twenty-first birthday, but we may, perhaps, be excused if we briefly review the financial position of the Hospital as revealed by the accounts for the year ended December 31st, 1916. The most gratifying feature is that during the year there has been an excess of income over expenditure of some £13,500. This is partly due to the receipt of £18,750 as part of a legacy of £25,000 from the late Mr. J. C. Eno. The total ordinary income was nearly £76,000, while the total ordinary expenditure was £88,000. Extraordinary income in the form of legacies amounted to about £27,500. Comparing these figures with those of 21 years ago, it will be seen that the Hospital expenses have nearly doubled, while the income from endowments has gone up from about £20,000 to over £46,000. During the year the Re-Endowment Fund has received over £20,000, bringing its total up to £361,600.

After the war the call on the Hospital will certainly be greater than ever. Whether subscriptions and donations will decline in view of the general depression which is bound to ensue it is difficult to say, but it is quite certain that as the Gazette of June 10th, 1896, puts it: "Our aim is complete re-endowment, and for this continued effort will be necessary." How well the "continued effort" has been kept up is amply demonstrated by the steady growth of the Re-Endowment Fund. Yet, until the Fund reaches the half million, no Guy's man ought to feel that more efforts on his part to add to the total are not needed.

Honours.

The following awards to medical officers for services in the field are announced :—

Distinguished Service Order.

R.A.M.C.

Capt. (Act. Lieut.-Col.) A. S. Littlejohns.
Major (Temp. Lieut.-Col.) J. E. Powell.
Major (Temp. Lieut.-Col.) H. Stewart, M.C.
Major (Temp. Lieut.-Col.) T. J. Wright.

N.Z.M.C.

Temp. Major T. D. M. Stout.

S.A.M.C.

Temp. Major C. M. Murray.

Military Cross.

Capt. W. George, R.A.M.C.
Capt. C. F. Searle, R.A.M.C.

Mentioned in Despatches.

In a despatch dated April 9th, 1917, received from Field-Marshal Sir Douglas Haig, G.C.B., Commander-in-Chief of the British Armies in France, the names of the following medical officers are mentioned :—

Army Medical Service.—Headquarters Staff.—Lieut.-Col. (Temp Col.) H. P. W. Barrow, C.M.G.; Col. E. G. Browne, C.B.; Temp. Capt. E. S. Marshall, Lieut.-Col. C. E. Pollock.

Royal Army Medical Corps.—Lieut.-Col. C. R. Evans, D.S.O.; Lieut.-Col. A. J. Hull, Temp. Lieut.-Col. J. E. Powell, Major (Temp. Lieut.-Col.) H. Stewart, M.C., Major (Temp. Lieut.-Col.) T. J. Wright; Temp. Capt. R. P. Ballard, Temp. Capt. C. G. Douglas, Temp. Capt. H. D. Eccles, Temp. Capt. H. B. German (late Surgeon R.N.), Capt. D. W. John (Spec. Res.), Temp. Capt. J. F. Lidderdale, Capt. (Acting Lieut.-Col.) A. S. Littlejohns, Temp. Capt. K. M. Nelson, Temp. Capt. O. G. Parry-Jones (Spec. Res., died of wounds), Capt. J. F. Robertson, Capt. A. H. Spicer, Capt. C. S. E. Wright, Capt. A. E. Rayner.

New Zealand Medical Corps.—Major T. D. M. Stout.

The name of Capt. S. McK. Saunders, R.A.M.C., is mentioned in a despatch from the Acting Sirdar and Governor-General of the Soudan dated April 17th, 1917.

RUSSIAN.

Foreign Decoration.—Order of St. Stanilas, 2nd Class (with swords): Fleet Surgeon C. M. Beadnell, R.N. 3rd Class (with swords): Surg. Prob. W. A. Turner, R.N.V.R.

FRENCH.

Croix de Guerre.—Capt. R. W. P. Jackson, R.A.M.C.

Wounded.

Capt. G. Thomson, R.A.M.C., attached to London Regiment.

The name of Capt. C. A. R. Gatley, R.A.M.C., should not have been included under the heading in our last issue, and we regret the error. Capt. Gatley is wounded and is at present at Hall Walker Hospital for Officers, Regent's Park, London, N.W.

We are glad to state that Capt. T. E. Roberts, R.A.M.C., reported wounded in our issue of June 2nd, is unharmed. The casualty referred to another officer of the same name and rank not connected with our Hospital.

Change of Address.

Major Wilson Tyson, R.A.M.C., from the Eastern Hospital, to 55th General Hospital, Boulogne Base, B.E.F.

Capt. V. E. Lloyd, R.A.M.C., 67th H.A. Group, B.E.F., France.

Surg. F. A. Knott, R.N. Hospital, Chatham.

Lieut. G. Maxted, R.A.M.C., 50th General Hospital, Salonika.

Lieut. S. Vidot, R.A.M.C., 44th Field Ambulance, B.E.F., France.

Capt. F. J. Wheeler, R.A.M.C., from 84th Army F.A. Brigade, France, to 41, Albert Road, Southport, Lancs.

E. F. Clowes, from "Grantley," Wotton-under-Edge, Gloucester, to 6, Trinity Street, Colchester.

Pass List.

University of London.

EXAMINATION FOR MEDICAL DEGREES.

THIRD M.B., B.S.

At the recent Examination the following candidates were successful:—Frederick Alexander Knott, Basil Sampson, Philip Smith.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette," Guy's Hospital, London, S.E.*

Concussion Wounds of the Eyes.

ON referring to the dictionary I find that "concussion" denotes a condition introduced by a more or less violent shaking of some particular organ whereby serious symptoms may be introduced, but no *definite* lesion can be detected to account for them. We must, however, recognise that owing to the enormous power of the explosives used in modern warfare, violent shaking or concussion may lead to very definite lesions which may be demonstrated to be due to the concussion.

The term "contusion" designates merely a bruising, without breach of surface, so that my remarks will refer to those injuries which are the result of vibrations conveyed to the tissues from a distance; and will not include those in which a definite rupture of the globe has occurred. We shall have to discuss also the results of both direct and indirect bruising of the eye-ball.

The globes are placed within two bony cavities and are indirectly connected with the bones of the skull and face for the larger part of their circumference. Vibrations or oscillations which are sufficiently strong can and do reach the inner surface of the eyeballs, transmitted through the bones of the skull, so that heavy pieces of metal or other hard material striking the bones of the face on one side start vibrations which are conveyed through the soft tissues to the inner tunics of the eye on the same or even on the opposite side. Similar blows on the margins or sides of the bony orbital cavities can also be transmitted through the sclerotic and produce serious concussion or shaking of the retina or choroid. Further, that part of the wall of the eye-ball which is unprotected by bone may be influenced by air vibrations, and many cases of serious damage to the globe have been recorded as due to "windage," in which, as far as the evidence goes, no solid particles have struck the face, only a force due to pressure of air or gases.

The simplest effect of contusion of the eye is probably the subjective one which we recognise as "seeing sparks." Many of us can remember in our boyhood fights getting this unpleasant sensation, and later in life, in striking the front or back of one's head against a hard substance, such as a door, table, etc., one had the same experience of rapid and momentary "sparking" of the eye. This is probably the result of a sudden interference with the circulation.

From these slight and transitory effects, we traverse numerous degrees of severity until we get to results so severe that the whole globe is entirely and irrevocably disorganised.

Concussion or contusion effects may be produced in four different ways:—

1. By vibrations, the result of metal, etc., traversing the orbits without directly lacerating the eye-ball. The "through and through" wounds.

2. By vibrations, the result of blows upon the bones of the orbit and face transmitted to the interior of the eyes.

3. By vibrations, transmitted to the deep parts of the globe through the corneo-scleral tunic without actual rupture of the eye-ball, as in direct blows on the eye itself.

4. By vibrations, the result of air pressure or "windage."

The lids and conjunctivæ seem to escape any very obvious damage owing to their mobile and expansible character. Beyond some conjunctival ecchymosis, I have not seen any damage that could be attributed to concussion; on the other hand, I have been assured that the explosive effect of some of the modern shells is such that not only have the lids been torn away, but the whole eye dislocated by the mere force of the displaced air and expanding gas, and I have talked to an officer having no trace of the remains of either eye, who assured me that the lid of one eye and the whole eye itself was torn from its socket by "windage," a shell having exploded just over him and that no metal, earth, or solid substance touched him. It was certain that no scar of any extent was present when I saw him, only the depression covered by skin where his eyes had been, the other eye having been so damaged that its remains had to be removed. I have had several cases with a very definite and circumstantial history that no metal or solid material had touched the eyes and that the explosive force of the shell only was responsible for the damage done. In most of these there was evidence of rupture of some of the vessels of the iris and ciliary body, usually of a comparatively slight kind, but in one instance,

Case No. 12, very severe and extensive hæmorrhage occurred, resulting in almost complete blindness, and the man is now under my care at St. Dunstan's.

Interesting in this connection is Case No. 57. This man was at Arras, where, two days after Christmas, 1916, the Germans bombarded from 10 p.m. to 3 a.m. He was about 150—200 yards from the bursting shells, in a solid building having shutters, but no windows. After the bombardment he fell asleep, and on awakening about 8 a.m. noticed a mist over his left eye; this proved to be due to an intra-ocular hæmorrhage. Was this caused by windage or was it mere coincidence?

It is sometimes very difficult to make up one's mind as to whether an injury is due to air pressure or not. A soldier will often tell you that "nothing struck his eye," and that he "had no wound," but if you question him you will very often find that there were slight scratches about the face or scalp, and sometimes one can also detect small corneal opacities which, no doubt, have been due to minute foreign bodies reaching the globe itself. On the other hand, the grossness of the deep changes in the eye do not suggest that these minute fragments alone produce the injury, and it seems more probable to attribute it to "windage" which is sometimes sufficiently powerful to blow a man right up in the air—a distance often many feet—or to throw him violently on his back from the erect position.

Pagenstecher reported in 1915 two cases of injury to the retina by increase of air pressure from grenades exploding in the near vicinity. The macula was clouded and the foveal reflex blotted out, the result, he thinks, of a delicate exudation taking place in the region of the macula. Those who have an opportunity of seeing these cases very early which, unfortunately, I seldom have, tell us that the retina shows some pallor and there is interference with the field of vision. What I think I have noticed is a condition in which the normal stippled appearance in and around the macula is absent and the ground work appears to be unusually uniform; when this clears away the retina may resume its normal appearance.

On the other hand, I have certainly seen one or two cases in which there has remained permanent mottling in the macular area with central scotoma.

I should like to keep before your minds the enormous force that is generated by the explosion of modern armaments. I am, however, from my experience, and such evidence as I have been able to obtain, disinclined to accept the view that the effects of "windage" alone, apart from all injury due to solid particles, can produce extensive discontinuity of tissue. That intra-ocular hæmorrhage can occur from it I think probable, but the tearing of large masses of tissue and dislocation of the globes themselves is not, I think, definitely proved.

I have seen two corneal conditions due to contusion, viz., striate keratitis, Case No. 69, and blood staining of the cornea, Case 55. The striate keratitis was associated with lowered intra-ocular tension, and as it disappeared in a few days, and the tension also increased, I thought it probably the result of rucking of Descemet's membrane.

Blood-staining of the cornea has been noted after concussion of the eye following on very extensive intra-ocular hæmorrhage. I have seen only one case of this, but it was a particularly good instance. The discoloration itself involved the whole of the cornea and appeared to me similar to a dense and uniform interstitial keratitis. The margin of the cornea cleared slowly, and the condition being associated with a dense mass of blood in the anterior chamber, left one in no doubt as to its real nature. The colour was greenish with a slight browny tinge in places and was present for at least three months.

There is still a fair area of opacity left, but it is slowly getting smaller and will, I hope, gradually disappear.

Concussion changes affecting the Iris and Ciliary Body.

A rupture of the sphincter pupillæ frequently follows both direct and indirect injury to the eye. The fibres of the muscular layer may be over-stretched, causing a permanent irregularity of the pupil, or actually torn, producing notches in the edges. The separation of the posterior pigment layer from the overlying stroma of the iris as described by Coats I have also seen once or twice.

A localised retraction of the iris, due probably, as was suggested by Mr. Treacher Collins, to a rupture of the ciliary body is also not infrequently seen, and, in fact, most of the changes in the iris that have been described

as resulting from concussion and contusion have been present amongst my series.

The periphery of the iris forms the most yielding spot in the posterior wall of the anterior chamber, and is the first to give way before the pressure of the receding aqueous.

Irido-dialysis, however, may be the result of of an injury to the posterior half of the eye as in Case 19, where the bullet went through the apex of the orbit.

Defects of accommodation are not uncommon as result of shell shock, and the manifestation of errors of refraction previously unsuspected by the soldier had led to the improvement of the vision of many cases by the correction of astigmatism and hypermetropia with suitable lenses.

An interesting condition of Hippus (Case 71) is recorded. This officer had no perception of light in one eye and very slight vision in the other. Both eyes showed the condition of Hippus.

Concussion changes affecting the Choroid and Retina.

It has long been known that both concussion and contusion injuries, direct and indirect, are able to damage the retina and choroid. There is very little to be added to General Stevenson's account published in 1897, and to Mr. Nettleship's observation already recorded in the "Transactions of the Ophthalmological Society" (vol. 21), except, perhaps to enlarge our ideas as to the distance over which these vibration effects can be carried.

At a discussion which was held in this Society in 1915, Colonel Lister stated that as far as he had noticed, if the bullet did not go through the orbit itself there were no concussion changes in the fundus. The orbital walls might be cracked or broken by some accident, yet the fundus showed no ophthalmoscopic change; whereas, if the bullet passed through the orbit, the globe not being ruptured, the usual dramatic concussion picture was seen. This, however, must be very seriously questioned.

In these accidents various sized pieces of metal are suddenly and violently driven in all directions. Some are, no doubt, minute fragments; some may be sufficiently large to actually tear the head from the body.

I have no hesitation in saying that it is not necessary at all for the metal to traverse the orbit to produce the dramatic concussion changes referred to by Colonel Lister.

A French surgeon, Dantrelle, has recently drawn attention to what he describes as a "dangerous area," and he does not mean the space immediately surrounding the corneo-scleral margin.

Dantrelle's "dangerous" area is really the the margin of the orbit for a distance of about two centimetres backwards from its edge, and he gives it as his opinion that a blow of sufficient force striking the margin of the orbit invariably leads to serious permanent damage to the globe itself, and my experience entirely agrees with this.

The large majority of the cases that I have seen this year showing ruptures of the choroid and retina, with extensive intra-ocular hæmorrhage have been due to damage done to the margin of the orbit, and if a man presents himself with the evidence of a wound, either at the external angular process or in the malar bone, or at the root of the nose, or even on the opposite side of the face, one finds almost invariably extensive damage to the globe even though the eye may appear on superficial examination to be untouched.

Another condition not infrequently seen as the result of a shaking of the eye is a widely spread disturbance of the retinal pigment. It is difficult to say what is the actual pathological factor which causes the precise allocation of this pigment. Sometimes it appears as grains of black pepper scattered over a mottled field, sometimes as triangular or spindle-shaped bodies with processes simulating retinitis pigmentosa. Sometimes again it is collected into one or two definite places where it forms dense masses of pigment without any sign of the choroid being involved.

I think that sometimes a rupture of the retina takes place on a flat plane, a large area of retina being temporarily displaced by vibrations which causes a sliding movement of the inner part of the retina over the pigment layer which is attached firmly to the choroid. This sort of movement, of one surface on another, takes place as the result of an oblique glancing blow, the retina being shifted at its most vulnerable part, viz., the bacillary layer. The alternate hypothesis is that the pathological lesion is the result of section of the posterior ciliary vessels and certainly in some of my cases this is extremely likely to have

occurred, as the bullet has passed through the orbits behind the globe, but close to the nerve head. The interference with the choroidal circulation leads to a proliferation of the pigment epithelium some of which is carried into the retina by leucocytes.

Hirsch pointed out in 1905 that this condition not infrequently follows severe contusion of the globe when the picture of retinitis pigmentosa may be closely simulated. It is, however, more common to find in association with this fine retinal pigmentary change a definite rupture of the choroid. Further gross changes in the choroidal and retinal vessels produce definite hæmorrhages, varying in size and quantity up to an entire obliteration of the whole of the red reflex.

The hæmorrhage, when it occurs, takes place in the layer of rods and cones, that is, the bacillary layer of the retina between the pigment epithelium and membrana limitans externa of the retina. This area is the one most easily disintegrated, and, as a rule, the layer of retinal pigment cells adheres to the choroid of which it really is a part. On the other hand, the membrana limitans externa is merely the boundary line of the sustentacular tissue of the retina. We therefore, not infrequently, find the retinal vessels lying distinctly in front of extensive hæmorrhages. When, however, the retina itself is also torn, this blood passes through the gap and spreads out between the membrana limitans interna and the hyaloid membrane of the vitreous. No hæmorrhage is usually found between the choroid and the sclerotic.

The presence of blood appears to have an irritating effect upon the surrounding tissue when it is extravasated in this way, and produces a low form of plastic inflammation in the situations where the hæmorrhage has been shown to exist. This produces a welding together of the various structures involved, with consequent atrophy of the tissues that are entangled, and in this plastic inflammatory material, after a period of some months, new fibrous tissue appears, which seems to be entirely derived from the choroid. This becomes organised and forms dense white masses which subsequently undergo a certain amount of shrinking. The simplest form of rupture of the choroid seems to be produced by a tear through the lamina vitrea and pigment epithelium; a small fold of retina is lifted up by the exudation of blood.

I have often noticed pear-shaped masses of hæmorrhage, globular in form, pushed forward into the vitreous, and showing no tendency to separate laterally or become diffused with the surrounding tissue. It appears to me that these hæmorrhagic masses are surrounded by a membrane which keeps them in bounds, and probably the hyaloid membrane in these cases is not ruptured, but only pushed forward in front of the hæmorrhagic mass. All the recorded cases that have been examined microscopically suggest that a low form of inflammation results from the presence of large intra-ocular blood clots. This, I take it, is due to the irritating effect produced by the presence of blood itself, as clinically one has no evidence whatever of any inflammatory trouble being present, the eye showing no increased redness and the patient not complaining of any pain.

One often sees small wounds of the conjunctiva covered by the lower lid, and on examining the interior of the eye finds definite hæmorrhage in the extreme anterior or lower periphery of the globe. This, no doubt, is due to direct hits upon the eye, but they have not ruptured the sclerotic, though they have produced a sharp blow on the superficial surface of the eye leading to a tear of some of the vessels in the ciliary region or just behind it.

I have had numerous cases of this sort and they are very easily overlooked, as the pateint's vision is seldom affected. Sometimes one is led to search for them by the history that there was some blood found in the eye when first seen, and these injuries are not infrequently associated with hyphœma (vide Case 50).

"Through and Through" Wounds.

By a "through and through" wound is meant one in which a bullet enters on one side of the head and passes through the orbits, leaving on the opposite side. Sometimes the bullet enters or leaves through one orbit destroying the globe in its path, or it may pass obliquely downwards and stop in the maxillary antrum on one or other side. On several occasions, earlier in the war, I removed metal from the antrum, but these "through and through" wounds are not so common now as when the sniper had a freer hand as in 1915. They usually produce extensive intra-ocular hæmorrhage with rupture of the choroid and retina; sometimes the optic nerve is directly damaged, and sometimes the iris, ciliary body, or lens are

indirectly involved. In these cases the line the bullets generally take is the line of least resistance, that is to say, they traverse the skull where the bones are thinnest and the air cavities most numerous. The exit or entrance scar is usually in the temporal fossa and the line of their passage traverses the orbits, posterior ethmoidal cells and the middle or superior meatus of the nose. Owing to the proximity of this line to the base of the skull and the not infrequent presence of "starred" fractures, there is no doubt that these "through and through" wounds are far more dangerous to life than almost any other of the wounds leading to loss of sight, and if these men's subsequent history is known it will be found that many of them succumb to cerebral abscess, meningitis, or end in a lunatic asylum.

I can recall at least half a dozen cases where death from cerebral abscess or meningitis has supervened sometimes 12 or 18 months after injury, and these wounds are, in my opinion, much more dangerous than the condition of the patient or appearance of the wound leads one at first to suspect.

Detachment of Retina.

Instances where the retina has become detached are not so infrequent as the opponents of the traumatic origin of retinal detachment would expect. Cases 7, 32, 58, and 79 are cases where after a varying lapse of time the sight failed owing to detachment supervening. Two of these four cases were myopic and all were the result of indirect injuries. The remaining Cases 23, 53, 66, and 76 were examples of solid detachment due to blood being poured out in the layer of rod and cones and pushing the retina forwards.

Concussion Cataracts.

The examples of concussion cataracts recorded in my notes have been extremely interesting and instructive. Most of them have shown the stellate form of posterior cortical cataract and have been associated with dislocation of the lens or irido-dialysis, the result of concussion. A smaller number showed anterior opacities.

The changes that I have seen have been mainly vacuolated and in some instances the peripheral striæ also have been present. I think I have satisfied myself that these manifestations of concussion are undoubtedly temporary. In one case the centre of the star seemed to open out so that a ring was formed and the radiations could be seen passing from the outer part of the ring, the centre becoming quite clear and the vision improving accordingly.

The posterior cortical changes supervene soon after the lens has been damaged; Mr. Hudson found them present in some cases a few hours after the injury. The vacuolation appears after the striation in from three days to a week. The lacework patterns are merely complex vacuolations differing only in degree and arrangement of the vacuoles; the granules are the remains of the vacuoles. We may, therefore, simplify the description of the changes by saying that they are vacuoles in various stages of development and arrangement except in the very early condition when they are striate and are grouped in relation to the lens star at the posterior central part of the lens, and also at the equator.

The views put forward to explain the condition are that they are due to distended physiological lymph spaces in the lens, or to definite but usually transitory changes in the lens fibres themselves, but I do not agree with either of these suggested causes. The first is improbable because Leber has disproved the existence of lymph spaces in the lens; and against the second it may be urged that if the lens fibres themselves were affected we should have more frequently the generalised opacity of the lens starting from the posterior surface, whereas these stellate opacities either disappear entirely leaving the lens quite clear or the lens turns opaque in some other plane, not originating at the posterior surface. I think the change is not in the lens, but rather on the posterior lens surface and is due to fluid coming from the vitreous passing under the posterior lens capsule, caused by a slight movement of the lens itself in the hyaloid cup of the vitreous body.

Instances of the anterior opacities have also been seen. An officer, wounded at the beginning of this year, showed very well the condition that was termed by Vossius "Concussion Ring." This man was wounded 10th December, 1916, and I saw him on the 22nd, that is, 12 days after injury. The right eye had been removed owing to the extensive damage from a shell bursting while he was in a dug-out. The left eye, however, had only been slightly affected. Numerous pieces of stone and metal had been scattered over his face and there

were some minute scars on the conjunctiva and in the cornea. He complained of defective vision in his left eye and was very much worried by his loss of sight. On examining the fundus I was unable to obtain a perfectly clear view, but I could see a D-shaped sub-hyaloid hæmorrhage in the lower and outer part of his field; this is rather unusual, as it was some distance from the macular region; beyond this the fundus seemed fairly healthy. On examining him at a short distance away by transmitted light, I saw occupying the centre of the red reflex an extremely well-formed definite ring. By paralactic movement I was able to ascertain that it was just in front of the nodal point, in the lens, but I could not see it by focal illumination at all. The ring, on careful magnification appeared to be made up of extremely fine opaque dots, and in one or two places there seemed to be slight gaps in the opaque area of the ring. The lens itself did not show any definite opacities, and, as I say, the opacities that one could see with transmitted light were not visible by focal illumination. There was no actual pigment present, and the condition altered very slowly, subsequently the lower area disappeared entirely about 6 o'clock leaving a horseshoe-shaped body.

Vossius assumed that these ring opacities were due to the pupillary margin of the iris being pressed against the anterior surface of the lens by the cornea. Hoeg's view, however, is that the ring is the result of sudden increase of pressure in the anterior chamber, which forcibly presses the iris against the lens and causes the ring opacities. The increased aqueous pressure is also assumed to be the cause of the opacities outside and within the ring. A condition that was described by Gifford of Omaha in the "Ophthalmic Record" for August 1910, was also present in this case, viz., a further area, where there were innumerable fine opacities scattered throughout the lens. This further area was not circular and was very much finer than the opacities forming the ring; in fact, I did not see them at all until the occasion of my second examination, and they disappeared quite soon after the patient came under observation.

It is improbable that the posterior cortical opacities are associated with a rupture of the capsule and the Vossius concussion ring *certainly is not. It is not true that the anterior* discoid cataract is never visible by focal illumination, as in one case (No. 74) I was able to make out its positions by the means of that and a binocular loupe, and it was distinctly deep to the anterior capsule, but in front of the nucleus.

As far as I have seen these anterior and posterior concussion changes do *not* lead to a general opacity of the lens unless the capsule has been definitely ruptured, and even large extensive *posterior cortical changes tend to* diminish and gradually disappear.

In two men, now under my care at St. Dunstan's, who were injured nearly two years ago, I have found changes which I think are the remains of posterior stellate cataracts. They consist of oval or rounded vacuoles, each one single and isolated, arranged sometimes in groups of five to six in number, sometimes more, looking exactly like bubbles of air in badly made glass.

Treatment.

There are one or two points regarding treatment that I should like to emphasise.

Firstly, the extreme usefulness of the "hot coil," *i.e.*, a pad of lint or bandage through which a graduated electric current is passed. By this means, continuous dry heat is applied for an unlimited time and in assuaging the pain of a bruised eye it has no equal. I have had several fixed in all my wards and they are continuously in use.

Secondly, I still adhere to the opinion I expressed last year that mechanical means are the best for hastening the absorption of vitreous and retinal hæmorrhage.

Thirdly, I have not hesitated to deal with the *complete traumatic cataracts as soon as the eye* has recovered from the immediate effects of the traumatism, and in only one case have I regretted doing so. *In this case a small piece* of wood was present in the ciliary body and a septic irido-cyclitis developed which resulted in a shrunken, blind eye.

Fourthly, in the treatment of the wounds involving the air cavities flanking the orbits free drainage is a necessity, and ophthalmic surgeons should be cognisant of the modern methods of dealing with suppurating sinusitis and should not hesitate to deal with these conditions under certain circumstances.

Fifthly, that hot fomentations frequently applied form the best dressings for wounds about the orbits which are almost invariably septic.

CONCUSSION WOUNDS OF THE EYES.

ILLUSTRATIVE CASES.

Wounds of "Dangerous Area"	1, 2, 6, 7, 9, 11, 14, 16, 22, 25, 26, 27, 31, 33, 43, 45, 46, 54, 62
Concussion Cataracts—a. Complete... ...	2, 18, 21, 28, 34
b. Posterior Cortical	22, 48, 63, 64, 68, 70, 75, 76
c. Anterior	56, 72, 74, 78
"Through-and-through" Wounds	3, 8, 17, 20, 24, 28. 29, 30, 34, 35, 36, 37, 40, 65, 67, 70, 71
Detachment of Retina	7, 23, 32, 53, 58, 66, 76, 79
"Windage"	5. 10, 12, 15, 44, 47, 49, 57, 59, 62, 79
Pigmentation of Retina	3, 11, 16, 25, 39, 40, 42, 49, 52, 54, 59
Macula Changes	3, 9, 11, 15, 16, 31, 49, 51, 80
Irido-dialysis	4, 19, 41, 63, 72, 75, 77
Damage to Optic Nerve	17, 23, 24, 28, 29, 36, 61, 65, 70, 76 & 60
Dislocation of Lens	21, 22, 48, 64, 69, 77
Injuries to Extra-ocular Muscles	23, 27, 38, 67

Initials.	Age, Rank, Corps.	When, where and how Wounded.	Vision of each Eye.	Condition of Eye and Notes in the Text.
1 A.	Age 22. Capt., 6th Lincolns	17/9/16. Thiepval. Bomb.	R.E. nothing direct L.E. 6/6	Direct injury to right malar bone. Fracture involved nose also; not antrum. Rupture of retina and choroid concentric with O.D. Much vitreous hæmorrhage, which became absorbed by November 17th
2 J.H.L	Age (?). 12th Durham Light Infantry	7/10/16. Le Sars. Shrapnel	R.E. 6/6 L.E., P.L.	L.E. Lens contused. Rupture of sphincter. Serrated edge to sphincter pupillœ. Complete cataract. Direct wound of supra-orbital ridge and root of nose. Capsule of lens ruptured and displaced
3 G.F.H	Age 24. Lieut., 116th Machine Gun Corps	20/10/16. Thiepval. Shell burst	R.E. excised L.E., L.M.O. (large moving objects)	L.E. Pigmented condition of fundus at macula. Rupture of inf. temporal vessels. Intra-ocular hæmorrhage. Probably had a "through-and-through" wound, as scar on left side in front of ear
4 N.	Private, Royal West Surreys	10/10/16. Somme. Gunshot wound	R.E. blind L.E. 6/6	Irido-dialysis. No scar seen. Metal removed from between the lids. No p.l. Haze of lens, vitreous, optic disc not seen. Nerve probably severed
5 A.M.F.	Age 32. 2nd Lieut. 7th South Lancs.	31/10/6. Near Thiepval. No actual contact. Windage	R.E. 6/6 c. plus 1 L.E. 6/6 c. plus ·5 = 6/6	"Windage." Fine haze in vitreous. Some retinal hæmorrhage in lower and outer part. Hyphœma after the accident. No evidence of direct injury
6 G.H.	Age 22. Private, 2nd Bedfords	12/10/16. Somme. Small shell splinters	R.E., L.M.O. L.E. 6/6	R.E. Rupture of choroid around optic disc. Wound on nasal side of right orbit. F.B. in orbit
7 J.D.	Age 39. Private, Royal Irish Fusiliers	15/8/15. Suvla Bay. Shrapnel	R.E. perception of light only L.E. enucleated	R.E. was not hit directly. Vision failed gradually. Large detachment of retina spreading up from O.D. Direct injury to left side of head
8 F.H.	Age 21. Private, Royal Fusiliers	20/12/15. By sniper's bullet	R.E. enucleated. L.E. can see contrasts	"Through-and-through" wound. Rupture of choroid and hæmorrhage in vitreous
9 A.W.	Age 29. Private,	5/4/16. Vermelles. Two pieces of metal at different times	R.E. 6/36 L.E. enucleated	Was hit twice, on two separate occasions. R.E. wound over zygoma. Concussion changes at macula only. Two small patches of choroidal atrophy near yellow spot

Initials.	Age, Rank, Corps.	When, where and how Wounded.	Vision of each Eye.	Condition of Eye and Notes in the Text.
10 A.	Age 35. Private, 7th Canadians	31/10/16. Le Sars. Explosion shell	R.E. 6/6 L.E. 6/18	"Windage." Hyphœma. Vitreous hæmorrhage in form of blobs of blood in extreme periphery below
11 H.W.O.	Age 22. Lieut., 1st Dorsets	18/11/16. Serre. Bomb	R.E. 6/24 L.E. 6/6	R.E. Pigmentary disturbance of retina at macula, central scotoma. Tears in iris and pigment on ant. surface of lens. No gross fundus lesion beyond fine scattered pigment. A mass of metal struck his helmet, which was forced down on to right temporal ridge.
12 C.	Age 19. Private, 1st Cheshires	3/9/16 (?). Guillemont. Shell burst. "Windage"	R.E., P.L. L.E., L..M.O.	"Was not touched." Shell burst within three yards. He did not lose consciousness, but was knocked down. "Windage." R.E. full of blood, which was turning white above V.—P.L. L.E. Blood in lower two-thirds of vitreous. Retina can be seen above V. Fingers. 1 ft. He had, however, two small scars, one in right upper lid and one in left lower lid
13 G.B.	Age 22. Private, 2/9 Yorks A.	16/7/15. Kummel. Shrapnel	R.E. 6/6 L.E. 6/18	Concussion blindness cured by hypnotic suggestion. Shrapnel burst at edge of trench and threw a lot of sand in his eyes. L.E. has a long wisp of scar tissue coming from vessel on outer side of optic disc
14 W.P.	Age 38. Private, Grenadier Guards	15/9/16 (?). "High Wood." Shell	R.E. 6/9 L.E. 6/60	Deep scar over left malar bone, with adherent skin and scar of trephining for depressed fracture of temporal region. Extensive rupture of choroid. Hæmorrhage in vitreous. V. indirect, in, out, and down, of field.
15 M.	Age 41. Capt., ? Corps	15/11/14. France. Shell burst. "Windage"	R.E. 6/6, normal L.E. 6/12, partly	Seen by me more than twelve months after injury. L.E. Slight but definite patch of choroidal atrophy at macula paracentral scotoma just above fixation point
16 A.	Age 31. Private, 9th K., Liverpool	24/9/16. Grand Court. Shrapnel	R.E. 6/18 L.E. 6/9	R.E. Adherent scar in malar region. Fine pigmentation in region of macula, extending widely. Two small ruptures of choroid in extreme lower periphery
17 S.S.T.	Age 32. 2nd Canadian Mounted Rifles	25/9/16. Courcelette. Somme. Bullet	R.E. enucleated L.E. blind	"Through-and-through" wound. L.E. Optic nerve cut through and rupture of retina and choroid
18 E.T.	Age 21. Private, Royal Sussex	4/3/16. France. Hand grenade	R.E., shadows at a few feet L.E. enucleated	The vision gradually failed in this case, and in November, 1916, the note was T.— 2. No red reflex. Shrinking mass of organised blood clot in vitreous. Cholesterin. Bare P.L. Lens opaque
19 A.C.	Age 28. Rifle Brigade	15/9/16. Somme. Bullet "through-and through"	R.E. enucleated L.E. blind	Irido-dialysis T.—2. "Through-and-through" wound
20 J.S.	Age 44. Private, 1st Royal North Lancs.	Struck by bullet	R.E., L.M.O. L.E. enucleated	Probably "through-and-through" wound. Both temporal regions showed scar. R.E. —1. Pupil small and fixed. Some iritic adhesions. Lens slightly opaque. Extensive hæmorrhage into vitreous
21 S.W.	Age 25. Cheshires	1/9/16. Thiepval. Rifle grenade	R.E. c. plus 9 = 2/60 L.E., P.L.	Rupture of retina at macula in R.E. Iris torn at pupillary margin. Lens dislocated up and in, opaque and shrivelled. L.E. traumatic cataract in situ. Irido-dialysis. Several wounds of the skin of face

Initials.	Age, Rank, Corps.	When, where and how Wounded.	Vision of each Eye.	Condition of Eye and Notes in the Text.
22 T.M.	Age 20. King's Liverpool	8/6/16. Malancourt. Somme. 18 lb. shell. Whiz-bang	R.E. no P.L. L.E. hand movements at 1 yd.	Face struck with large piece of metal. L. malar bone R. supra-orbital region. Eyes themselves not struck. R.E. iris tremulous. Lens dislocated up and outwards. Rupture of retina and choroid. Concussion cataract, palisade opacities. L.E. lens drawn up and out behind iris. Fundus seen c. plus 10 sph., general pigmentary changes all over retina. Small choroidal rupture near disc.
23 M.	Age 18. No. 4811, Irish Guards	20/12/14. Bullet. Sniper. "Through and-through"	R.E., P.L. L.E. no P.L.	Both eyes in situ. L. ext. rectus muscle is paralysed. R.E. organised mass of blood pushing retina forward. Detachment of retina. L.E. blind. Optic nerve ruptured at nerve head. Probably direct injury to globe.
24 D.	Age 33. Sergt., Aldershot	10/5/15. Aldershot. Bullet	R.E., L.M.O. L.E, blind	"Through-and-through" bullet wound. R.E. rupture of choroid. L.E. complete atrophy of nerve head
25 K.	Age 22. Private, 50th Australians	18/8/16. Somme. Splinter of shell casing	R.E. 6/6 L.E. fingers at a few feet	Struck on margin of orbit on left side below cut lid. L.E. extensive pigmentary changes. Pigment peppered all over fundus. One or two short white streaks showing rupture of choroid
26 H.	Age 29. Private, 6th North Hants	16/11/16 (?). Albert. Shrapnel	R.E. 6/6 L.E. counts fingers at 1 ft.	Struck on left supra-orbital margin. Rupture of choroid. Pigmented retina. Vitreous hæmorrhage
27 T.Y.	Age 25. Private	3/9/16. Beaumont. Hamel. Shrapnel	R.E. 6/18 L.E. nil	L.E. scar on left orbital margin. Vitreous full of blood. Dull red reflex. R.E. was amblyopic. Squint developed after injury. Concomitant fixes with right eye. Vision did not improve
28 F.	Age 36. Lance-Corpl., 2nd Leicesters	27/1/15. La Basse. Bullet	R.E. enucleated L.E. blind	"Through-and-through" bullet wound. Bullet entered left side ½ in. behind outer canthus. Left at outer angle of right orbit, destroying the globe. L.E. nerve cut through. Lens subsequently became cataractous. Anosmia. Vitreous hæmorrhage
29 R.C.	Age 20. 1st Royal Fusiliers	16/12/14. Armentiers. Bullet	R.E. enucleated L.E. blind	"Through-and-through" bullet wound. Bullet entered on right side through right upper lid and frontal sinus, passing obliquely backwards to a point 1½ in. above and behind external angular process. L.E. rupture of optic disc and choroid in neighbourhood of disc
30 B.	Age 29. Sergt., 1st Rifle Brigade	27/8/14. Ligne. Bullet	R.E. enucleated L.E., L.M.O. to nasal side	"Through-and-through" bullet wound which entered on left side behind outer canthus and left through right orbit, destroying right globe. L.E. optic disc pale. Large mass of soft white organised blood in inner side. Outer half of retina normal.
31 S.	Age 19. Private, 1st Lancs. Fusiliers	End Oct., 1916. Bapaume. Shell exploding and burying him	R.E., L.M.O. L.E. 6/6	R.E. scar over outer canthus. Scattered pigment changes at macula, grosser changes at outer half of retina. Pigmented scar tissue. Rupture of choroid there
32 P.W.	Age (?). Private, 2nd Gordons	Sept., 1915. Hooge. Shell exploded and buried him in mud	R.E., L.M.O. L.E. 6/6	He was buried in mud, etc., by a shell explosion, Sept., 1915. Sight of right eye affected, but improved. He returned to trenches and noticed nothing until the autumn, 1916, when sight gradually failed. Fine pigment changes near O.D. Rupture of retina below the disc. Transparent detachment of retina outer side. Vitreous haze

Initials.	Age, Rank, Corps.	When, where and how Wounded.	Vision of each Eye.	Condition of Eye and Notes in the Text.
33 C.	Age 20. Private, 1st Essex Regiment	Somme. Shell struck him	R.E., P.L. L.E. 6/6	R.E. struck on outer wall of right orbit, where are two small scars. Extensive vitreous hæmorrhage and concussion changes on outer side
34 W.	Age 19. Private, 1st Battalion Scots Guards	21/1/15. La Bassee. Bullet	R.E. enucleated L.E. c. plus 12 = 6/60	"Through-and-through" bullet entered at inner canthus of L.E., scarring left cornea and passed through nose and out through right orbit. Lens of L.E. turned opaque and was needled. Organised blood in vitreous.
35 W.G.S.	Age (?). Private, Northamptons	15/11/14. Neuve Chapelle. Bullet	R.E , L.M.O. L.E., P.L.	Some vitreous hæmorrhage in both eyes, which has organised. No details of fundus seen in either eye. Had wounds on lids and left temple
36 C.V.	Age 25. Belgian	25/10/14. Dixmude. Bullet	R.E. blind L.E. enucleated	"Through-and-through" bullet wound. Entered left side, striking upper margin of the orbit and traversed head to a point just in front of right ear. R.E. Optic nerve severed close to globe; rupture of retina and choroid from optic disc, upwards and outwards.
37 S.I.	Age (?). 3rd Battalion Rifle Brigade	16/1/15. ? Bullet	L.E. 6/60	"Through-and-through" bullet wound. Entered through right orbit, passing downwards and leaving through malar region. Left pupil ruptured. Vitreous hæmorrhage
38 B.	Lieut.	Hill 60. Shrapnel	R.E. 6/6 L.E. 6/6	Diplopia. Movement of L.E. upwards, defective, Both eyes apparently normal. Condition lasted until July, 1915, and then disappeared. ? hæmorrhage in muscle
39 J.B.	Age 41. A.S.C.	1/8/16. Loos. "Whiz-bang"	L.E. 6/60 c. plus 6. Amblyopia R.E., P.L.	R.E. rupture of choroid at macular. Very small fine pigment scattered over fundus, around the optic disc, looking like black pepper on mottled background. Scar of right lower lid.
40 B.	Age 31. Lance-Corpl., 2nd Highland Light Infantry	1/7/16. Vimy Ridge. Bullet	R.E. no P L. L.E., L.M.O. at 8 ft.	"Through-and-through." Bullet entered on left side in temporal region and traversed head horizontally. R.E. optic atrophy. Extensive fine pigment changes. L,E. rupture of choroid. Pupil reacts.
41 T.L.	Age 32. Private, 1st Royal Warwicks	26/8/16. Hill 60. Shrapnel	L.E. 6/6 R.E ?	R.E. irido-dialysis. Rupture of sphincter. Mixed astigmatism. Fundus healthy. Small corneal scar. Contusio Bulbi
42 B.	Age 27. Lance-Corpl., Welsh Fusiliers	16/10/16. Loos. Shell splinter	R.E. 6/36 L.E. 6/6	Fine concussion changes. Pigmented disturbance of retina and choroid at inner side. Metal removed from inner side of right orbit
43 H.J.S.	Age 24. Lieut., 12th Suffolks	10/8/16. Marne. Bomb	R.E. nil L.E. 6/6	Rupture of iris and sphincter pupillæ from blow on right malar bone. No red reflex Blood in cornea. Separation of iris stroma from posterior pigment layer. This can be seen for three-quarters of the circumference of the iris. Recurrent hæmorrhage into vitreous. Excised February, 1917
44 C.S.	Age 22. Corp., 18th Welsh Regiment	17/10/16. Loos. Explosion of shell	R.E. 6/9 L.E. 6/36	"Windage." Some retinal and vitreous hæmorrhage in extreme periphery below. No scar of wound found
45 I.J.T.N.	Age 20. Private, Royal Fusiliers	28/5/16. Vimy Ridge. Shrapnel	R.E. enucleated L.E. 5/60	Fracture of left malar bone and lower margin of orbit, extending to nose. Middle turbinate bone bound down. Obstruction to tear passage. Rupture of choroid, extending to the O.D.

Initials.	Age, Rank, Corps.	When, where and how Wounded.	Vision of each Eye.	Condition of Eye and Notes in the Text.
46 G.H.	Age 22. Private, 2nd Bedfords	12/10/16. Somme. Shell or gunshot	L.E. 6/18 Mixed ast. R.E. shadows at a few feet	Wound of orbital margin. Rupture of choroid
47 F.T.	Age 17. Private, 9th Norfolks	Date ? Somme. Shell explosion	R.E. 6/6 L.E. 6/36	"Windage." Small rupture of choroid and hæmorrhage in extreme anterior periphery. No scar
48 A.C.	Age 56. Civilian	3/2/17. London. Was cutting wood when a piece flew up and struck L.E.	R.E. 6/6 L.E. 6/36	Lens dislocated T. plus 2. Trephined sclera. Post. polar concussion cataract, star shaped, which subsequently altered position, passing to periphery and diminishing in size. Contusio Bulbi
49 A.E.	Age 18. Private, 20th Middlesex	27/8/ . Amiens. Explosion of ammunition	R.E. 6/60 L.E. 6/6	"Windage." Was blown up some feet into the air. R.E. concussion changes at macula. Disturbance at pigment. Central scotoma. Contraction of field to outer side
50 G.S.	Age 43. Civilian, Labourer	18/11/16. Wounded whilst acting as game beater. Struck by pellets of scatter gun	R.E. 6/6 L.E. 6/6	Some vitreous hæmorrhage in extreme periphery and tears of retina. Contusio Bulbi. Direct hit.
51 C.N.	Age 25. Civilian	L.E. struck by racket ball	R.E. 6/6 L.E. 6/12	Rupture of choroid close to macula. Contusio Bulbi, direct
52 E.C.	Age 23. Private, 11th Royal Warwicks	Date ? Loos. "Minnen Werfer" exploded 6 yds. away	R.E. 6/24 L.E. enucleated	R.E. two small corneal scars. Fine pigmentary changes all over the fundus, with some hæmorrhage in extreme lower periphery organising. Force of explosion spun him round and round "like a top." Injury to R.E. due to "windage" or indirect from left side
53 E.C.	Age ? Private, 1st Seaforths	/8/15. La Bassee. Explosion. Struck by sandbag	R.E., L.M.O. L.E. 6/6	R.E. solid detachment of retina due to choroidal hæmorrhage. Has scar ¼in. square above, in right eyelid
54 S.H.R.	Age 42. Private, 76th Canadians	1/11/16. Somme front. Shrapnel	R.E. enucleated at Boulogne L.E. 6/12	Shrapnel pierced root of nose after entering right orbit. Scattered pigmentary disturbance on inner side of fundus. Disc normal. No white areas seen
55 D.B.	Age 20. Private, 2nd Lanc. Fusiliers	1/7/ . Somme. Splinter of bursting shell	R.E. blind L.E., P.L.	R.E. shrunken, L.E. blood staining of cornea. following hæmorrhage, result of iridectomy for bloched pupil
56 L.W.	Age 25. Lieut.	10/1/17. Bursting shell	R.E. enucleated L.E. 5/12	L.E. "vossius" concussion ring, typical. Subhyaloid hæmorrhage in lower periphery. Lens changes disappeared early in April
57 G.C.	Age 44. Bombdr. R.G.A.	27/12/16. Arras. Bombardment. "Windage."	R.E. 6/6 L.E. 6/24	L.E. floating vitreous opacities. Curtain of opacity in periphery below and in mid-line a mass of red coagulated blood. No rupture of choroid. He was 200 yards from bursting shells. Bombardment lasted from 10 p.m. to 3 a.m. He then slept, and on waking noticed mist in eye. Concussion or coincidence ?
58 B.	Age 29. Capt., 1/4 Royal Berks	/8/16. Bullet "through-and through" behind malar bone	R.E. c. — 8 = 6/60 L.E. c. — 8 = 6/60	Patient highly myopic. Numerous choroidal ruptures seen in both eyes, with hæmorrhage. Has a transparent detachment of retina in the left eye, up and in

Initials.	Age, Rank, Corps.	When, where and how Wounded.	Vision of each Eye.	Condition of Eye and Notes in the Text.
59 R.	Age 24. Lance-Corpl., 7th South Staffs.	27/12/16. Ancre. "Wiz-bang" exploded 10 yds. away. "Windage."	R.E. 6/60 L.E. 6/6	Both eyes showed extensive scattered pigmentary changes of retina without any other grosser lesion. The changes in R.E. were central; in L.E. peripheral and less marked. "Windage"
60 B.	Age 30. Lieut., 4th Royal Sussex	29/12/16. Riviere. Shell exploded in front of dug-out as he was leaving. "Windage"	R.E. 6/12 L.E. 6/6	Right optic disc decidedly paler than left. Slight disturbance of pigment downwards and onwards. Has lost colour vision. Field limited generally. No central scotoma, but general haze
61 C.	Age 22, 2nd Lieut., R.F.A.	22/1/17. Marieux. Aeroplane accident. Pilot on machine which fell 300 ft., but side-slipped at the last	R.E. 6/6 L.E. 6/18. Later 6/6	L.E. had a central scotoma 10 in. in extent. Machine fell and he struck his nose violently and also the back of his head. Probably had hæmorrhage into base of his skull. Vision of L.E. cleared up entirely
62 S.	Age 25. 4th Corps, 1st Lanc. Fusiliers	4/12/16. Guillemont. Bursting shell	R.E. 6/60 L.E. fingers 6 ft.	"Windage." Was knocked over by exploding bomb. R.E. rupture of retina. L.E. rupture of iris. Lymph on ant. surface of lens. Extensive rupture of choroid in macula. Has some scars on face
63 A.W.C.	Age 22. Lieut., 7th Leinsters	2/2/17. Plug St. Trench mortar	R.E. 6/24 L.E. 6/6	"Irido-dialysis." R.E. Star-shaped opacity at post centre of lens. Concussion cataract. Fundus healthy. Direct hit on eye
64 R.W.	Age 48. Private, 7th Leinsters	26/1/17. Somme. "Something exploded in the incinerator" and struck his eye	R.E., L.M.O. L.E. 6/6	R.E. lens dislocated. Concussion cataract at post. pole. Vacuolation. Iris torn and pupil dilated. Blood in anterior chamber. Direct hit on eye
65 G.S.	Age 20. Argyle & Sutherland Highlanders	26/3/16. Arras. Bullet	Blind. No P.L.	"Through-and-through" wound. R.E. optic nerve severed. Rupture of choroid. L.E. shrunken. Posterior rupture of globe. Enophthalmus
66 R.L.	Age 26. Private, King's Own Scottish Borderers	9/3/16. Loos. Shell explosion	R.E. blind L.E., P.L.	R.E. lens opaque. F.B. in eye. Eye subsequently lost by septic irido-cyclitis. L.E. large solid detachment of retina due to blood in choroid
67 P.H.E.	Age 41. Lieut.-Comdr. R.N.V.R.	13/11/6. Somme, Bullet wound	R.E. 6/6 L.E. blind	"Through-and-through." Left optic disc severed. Rupture of choroid and retina near the disc. Altitudinal squint. L.E. lower than right. No movement upwards
68 J.A.	Age 23. Private, Royal Irish Fusiliers	25/4/15. France. Shrapnel	R.E. blind L.E. shadows	Extensive rupture of choroid and retina. B.E. remains of posterior. Cortical cataract. A group of oval vacuoles irregularly arranged, about 20 in number
69 S.H.H.	Age 28. Private, 12th London	20/2/17. Neuve Chapelle. Mass of hard earth	R.E. 6/6 c. glasses, 6/6 L.E. blind	L.E. Striate Keratitis. Rucking of Descemet's membrane T—2. Contusio Bulbi. Lens Dislocated. Post. cortical stellate concussion cataract. Sphincter pupillæ ruptured
70 R.W.S.S	Age 27. Private, 1st Coldstreams	May, 1915. Neuve Chapelle. Bullet	R.E. blind L.E. enucleated	"Through-and-through" wound. R.E. optic nerve severed. Pupil widely dilated and fixed. Remains of posterior cortical cataract. A group of oval vacuoles looking like air bubbles on posterior surface of lens

Initials.	Age, Rank, Corps.	When, where and how Wounded.	Vision of each Eye.	Condition of Eye and Notes in the Text.
71 C.H.R.	Age 23. Lieut., 1st Middlesex	1/7/16. Somme. Bullet	R.E., bare P.L. L.E. no P.L.	"Through-and-through" wound. Rupture of choroid and retina and optic nerve on left side. Both pupils displayed hippus when examined January and March, 1917. Slow rythmic contractions and dilation
72 E.McA.	Age 29. Rifleman, Royal Irish Rifles	1/3/17 Bouchavesnes. Shrapnel	R.E., L.M.O. L.E. 6/6	Irido-dialysis T—½. Posterior cortical concussion cataract stellate in form. Vacuolations. Ant. part of lens also turning opaque. Eye removed subsequently on account of pain.
73 S.B.	Age 24. Private, East Kent Yeomanry	6/9/16. Somme. Bullet	R.E. nil L.E. 6/60	R.E. enucleated. L.E. large coarse mass of pigment at macula, with fine changes peppered over large area of fundus. No evidence of rupture of choroid or retina
74 T.N.	Age 70. Civilian	13/3/17. Struck by mass of soft clay thrown by fellow-workman	R.E. 6/6 L.E. 6/24	In front of nodal point of left lens is a circular discoid cataract, which can be seen both by transmitted and by focal illumination. It was distinctly deep to anterior capsule. It was similar in size to the "Vossius" concussion ring, but some fine opaque dots filled the interior of the ring
75 W.W.	Age 26. Private, 7th Leicesters	26/2/17. Vermelles. Shrapnel	R.E., L.M.O. L.E. 6/6	F.B. removed by magnet at Boulogne. Irido-dialysis. Post. cortical concussion cataract. Stellate. Some deposit on ant. surface of lens, also palisade arrangement of vacuoles at lens periphery
76 D.T.M.S	Age 30. Lieut., Royal Welsh	24/9/15. Festubert Bullet	R.E. 3/60 L.E. nil	"Through-and-through." R.E. detachment of retina, result of hæmorrhage. Has four air bubbles on posterior surface of lens. Vacuoles. L.E. optic nerve severed
77 H.I.B.	Age 30. Private, Rifle Brigade	6/2/17. Combles. Explosion of cartridge	R.E. 6/6 L.E., no P.L.	Anteversion of torn iris. Posterior surface of iris seen from the front upper half of iris torn. Irido-dialysis. T—I. Lens dislocated. Case seen by courtesy ef Mr. Dawnay at Great Northern Hospital
78 B.	Age 31. Private, 2/5 Leicesters	16/3/17. Favricourt. "Whiz-bang."	R.E., P.L. L.E. 6/9	Was rendered unconscious for an hour by explosion. Has two small scars in upper lid of R.E. Anterior capsular opacity, square shaped. On magnification, opacity shows minute dark points making up opacity and spreading beyond it. Folds in capsule can be seen distinctly. Iris ruptured. Lens dislocated. Vitreous opacity. No F.B. in eye
79 G.S.	Age 26. Private, R.A.M.C.	25/12/16. Albert. Shell burst	R.E. fingers 3 yds. L.E. c.—8/15—6/12	Large shell burst 12 feet away. Twelve hours later headache. Eight days after noticed sight begin to fail. Billowy opaque detachment of retina below. Floating vitreous opacities. Minute superficial scar on cornea
80 G.L.	Age 41. Civilian	12/3/17. Northfleet. Piece of wood struck L.E.	R.E. 6/5 L.E. 6/36 indirectly	Circular hæmorrhage at macula deep to retinal vessels. When this absorbed an area of choroid-retinal change could be seen

The Need for an Infants' Centre at Guy's Hospital.

IN the Children's Department we have problems to solve which are not encountered in other departments of the Hospital. Much attention is being paid to-day to statistics of infant mortality; but more terrible than the high death rate is the all-prevailing infant morbity. Among the children in Bermondsey and Southwark there are few indeed who attain even to a moderate standard of health. The greater part show in their bodily development the evil results of faulty feeding and bad hygiene. The nutrition of the children is so poor that infections of all sorts are rife among them—infections which are not so much the cause of the failure of nutrition as the result of it, and which in other branches of medicine would be spoken of as "terminal" infections. In these faulty children of the Poor, not a month, hardly even a week, passes without a feverish attack due to some catarrhal infection of nose, throat, ear, bronchial tubes or bowel. To infections which would be trivial in other and stronger children, they react with the most violent symptoms. A simple cold in the head may give rise to convulsions, high temperature or profuse diarrhœa and vomiting, and the child may be so prostrated that the illness has all the appearance of a severe and even dangerous disorder.

We may divide the children seen at Out-Patients into two groups. The smaller comprises the children who are suffering from one or other of the well-recognised disorders of infancy and childhood. Thus, to mention a few examples, there comes to the department a constant stream of cases with tuberculosis, congenital syphilis, cretinism, Mongolian defect, heart disease, marasmus, anterior poliomyelitis or meningitis. These cases find their proper home in the Department. At present they are submerged by the vast numbers in the second group, cases which owe their ill-health not to specific infections, but to the miserable circumstances of their home life—faulty and feeble children, ill clothed, ill fed and unclean, shut off from light and air in foul and stuffy dwellings, children whose resistance to infections has sunk so low that, like an old coat, they begin to give way at all points at once. In one week conjunctivitis, in the next tonsillitis, in the third bronchitis, in the fourth impetigo may be the complaint, but underlying all is the fault of nutrition. Certainly the study of these children is not without interest. In trying to understand the nature of the failure of health, in learning to estimate the part played by the different causative factors in each case—for example, how far the contamination of milk is to blame, how far the catarrhal infection of the child, how far faults in the choice and composition of the food, or again, in recognising the varying reactions of children to faults of environment, we approach the very roots of the problems of infant mortality and the protection of infant life.

There is, however, an insuperable objection to treating this group of cases in the ordinary way in the Out-Patient Department. It is not only that their numbers are too great or that they attend irregularly and intermittently. I deplore their attendance only because I have no means of benefitting them at my command. The ill-health is due to faults of environment, and over the environment I have no control.

To attempt to correct the environment is the work proper to an Infants' Centre. There an effort is made to improve the nutrition of the children and so to raise their resistance against infection. Diet and clothing are supervised, the home is visited, better ventilation is encouraged, cots are improvised, outings arranged and so forth. The whole environment of the child is investigated and the attempt made to improve it, and since the central place in the environment must be occupied by the mother, through and by her everything must be done. Her friendship must be won and her willing co-operation secured by showing her that we are kind to the child, interested in its welfare, and eager for its improvement. Work of this sort, if it is to be efficient, must be minute and painstaking. In the nature of things the physician at Out-patients can never find time to become the family friend and adviser. This is the rôle of the worker in an infant centre. The child I speak of needs not drugs but the means to a more healthy home.

To many families living in Bermondsey and Southwark, and sometimes even further afield, the Hospital assumes the position of the family doctor. If the child falls sick and the fears of the mother are aroused, the little one is hurried to the hospital in search of a bottle of medicine, After three or four attendances, the mother, exercising her own judgement, decides that the child is "getting on" and the attendances cease, to be resumed perhaps a month or two later under a new stress. There are many families in the neighbourhood of the hospital

every member of which is from time to time under the care of the hospital in this intermittent and unsatisfactory way.

In this sense it is true to say that the hospital has already under existing conditions undertaken the care of the health of hundreds of families. Does it discharge that responsibility efficiently? Do we make an honest attempt to benefit the children who depend upon us, or is there an appearance of service without the reality? No doubt the anxious mother finds comfort in the possession of the bottle of medicine and satisfaction in the feeling that she has had the child "seen to." But I say with all earnestness that the present arrangements, for which I am responsible, provide treatment for this class of case which is inadequate and ineffective and I can say no worse.

In addition to the present department for Children's Diseases, there is required the establishment of a Centre for Infant Welfare, including a department for the care of the pregnant women on our Charity, a school for midwifery, and a school for workers in infant welfare. For years I have urged that this should be done. I have tried outside the hospital to interest those who have the power to help financially in the scheme which I have at heart, but I have not succeeded. The time has now come when the establishment of such an institution can no longer be delayed. The success achieved in other places which can boast neither our opportunities nor our resources has made it necessary for the sake of our good name.

The staff required for the Ante-natal Clinique, the Infant Centre, and the Midwifery School would be as follows:—

1. Two physicians who should devote half of their time to the work, and who should also serve as Clinical Assistants in the Children's Department.

2. Four women workers fully trained to act as instructors in infant welfare work, ante-natal work and midwifery.

3. An almoner or registrar to preserve records, to compile statistics and to keep in touch with the different charitable agencies which look after the welfare of children.

4. The pupils in Midwifery and Infant Wellfare work.

A separate building would be required for the work, and it would be advisable, though perhaps not essential, that one of the physicians and all the trained workers and pupils should live on the premises. In addition the accommodation must include a large hall for the mothers and children, a consulting room, dressing rooms for expectant mothers, a weighing room for the babies, and an office for the Registrar. The rooms should be as unlike Hospital buildings as possible. Ultimately, when the war is over, we should possess "a House Beautiful," built if possible for the purpose, lacking nothing that will help to raise a sense of joy in healthy babyhood in the hearts of even the poorest and least understanding of mothers.

H. C. C.

Papers by Guy's Men.

Percival P. Cole, M.B. Birm., F.R.C.S. Eng.: Plastic repair in war injuries to the jaw and face.—*The Dental Record*, June, 1917.

Capt. Geoffrey Marshall, R.A.M.C. (S.R.): The administration of anæsthetics at the front.—*B.M.J.*, June 2nd, 1917.

A. E. Rowlett, L.D.S. Eng.: Mandibular anæsthesia.—*Dental Journal*, June 1st, 1917.

R. P. Rowlands, M.S. Lond., F.R.C.S. Eng.: Operation for loose semilunar cartilage.—*The Lancet*, June 9th, 1917.

Capt. Geoffrey Marshall, R.A.M.C. (S.R.): Anæsthetics at a Casualty Clearing Station.—*Proc. of the Roy. Soc. of Med.*, May, 1917.

H. C. Cameron, M.D., F.R.C.P.: Status lymphaticus from the clinical standpoint.—*B.M.J.*, June 9th, 1917.

Periodicals received.

The London Hospital Journal, The Hospital, The Prescriber, The Samaritan Magazine, The Nursing Times.

Births.

DAW.—On May 20th, at a Nursing Home, Leeds, the wife of S. W. P. Daw, F.R.C.S., Capt. R.A.M.C. (T.), Park Square, Leeds, of a son.

TRETHOWAN.—On June 3rd, at 8, St. Thomas's Street, S.E., to Mr. and Mrs. Trethowan, a son.

Deaths.

DOUDNEY.—At Nigeria, West Africa (Northern Provinces), Leslie Doudney, West African Medical Staff.

TILBURY.—Missing and believed drowned in the Mediterranean on May 4th, Capt. Arthur Tilbury, R.A.M.C., M.R.C.S., L.R.C.P. Lond., aged 29.

WHITWORTH.—At St. Agnes, Cornwall, on May 4th, William Whitworth, M.R.C.S. Eng., L.S.A., aged 63.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

IN another column we print the instructions for Air Raids recently issued by the Superintendent. The scheme is one which is designed to enable the Hospital to deal efficiently with a considerable number of casualties without congestion or confusion. The system of tally-labels in use at Casualty Clearing Stations has been adopted, and ensures that a record of all patients seen or admitted is readily obtainable. The system by which all wards receive an equal amount of work, ought to ensure each patient receiving immediate and detailed attention as soon as he arrives in the ward.

The importance of dealing with the shock in severely wounded cases is rightly insisted on. Experience in war surgery has shown quite clearly that, provided no hæmorrhage is going on, all severe cases are benefited by being kept for some hours before operative interference. The only cases in which this is disputed are perforating abdominal wounds. Even in these cases there are some well-known casualty clearing surgeons who prefer to wait a short time before laparotomy, in order to allow the shock to be overcome. In the big raid of June 13th there was, perhaps, in some quarters rather too precipitate a rush to the Operating Theatres. We hope that in future this will not be the case, for in nearly every case a delay is not only beneficial to the patient, but enables the case to be dealt with by more experienced operators and anæsthetists.

The present scheme is, of course, only applicable to raids in which the number of casualties brought to the Hospital does not exceed a moderate number an hour. If we are unfortunate enough to have large numbers of explosions in the area served by the Hospital, there can be no doubt that it will be necessary to use the Out-Patient Department in addition to the Surgery. An almost unlimited number of patients could be placed in the Out-Patient Hall, where the more seriously injured could be easily picked out for immediate treatment, while the slighter cases could wait in comfort and receive anti-tetanic injections. If the Out-Patient Hall be used in addition to the Surgery, care must be taken that all patients admitted to the wards should go *via* the Front Surgery lift and the subway, otherwise there would be considerable confusion in determining the number of beds still available.

The Hospital has many advantages over the average Casualty Clearing Station, and should, if necessary, be able to deal with very large numbers of patients. In one way, however, it is at a disadvantage. At a C.C.S. the stretcher cases are allowed to remain on their stretchers

after arrival, and are often sent on down to the base on the same stretcher. Here, on the other hand, the ambulances which bring up the patients will wish to have their stretchers returned at once. This will involve finding other accommodation for lying down cases.

We hope there may be no need for the efficiency of the Superintendent's instructions to be tested, but if there is, it is to be hoped that the Surgery will be kept free from everyone but those whose duty brings them there, and that not more than one person will be giving orders there at any one time. In the instructions issued we do not see anyone named whose word is to be final on all questions that may arise. Failing anyone else, we should suggest that the Take-in House-Surgeon should be supreme, and that no interference with his instructions by any other persons should be allowed.

We do not know who are the authorities responsible for the Ward Appointment list for the months of July, August and September, but in several details their selections have aroused considerable interest. In the first place it will be noticed that the numbers of Full Surgeon's Dressers are very unequal on the different firms. Sir Arbuthnot Lane and Sir Alfred Fripp rejoice in the possession of four dressers each, Mr. Steward has three, and the unfortunate Mr. Dunn has to do his best with only two. The reasons for these discrepancies are not easy to find, for it is well known that on Sir Arbuthnot's firm the work, so far as dressings are concerned, is, as a rule, comparatively light, and we cannot suggest any reason why Sir Arbuthnot's firm should have double the number of dressers allotted to Mr. Dunn. Again, the selections for the Special Appointments are remarkable for the fact that several students have been selected to do appointments which they have already done once or are now doing during the present three months.

The many Guy's men who have had the privilege of working under Mr. Zamora will hear with great pleasure of his recent success in passing not only the Final Examination for the Fellowship of the Royal College of Surgeons, but also the Master of Surgery examination at Cambridge.

In our last issue we published a long and most interesting paper on Concussion Wounds of the Eyes, together with a list of cases. We regret that by an error the name of the author of the paper was omitted. As most Guy's men will have guessed from internal evidence, it was written by Capt. A. W. Ormond. We offer our apologies for the omission.

One of the Medical Ward Sisters has sent us the following remarkable epistle received by her:—

> "i have just seen my brother's gost is he ded. Will you Please answre cant Write mor feel to bad just now."

Strange to relate, the brother in question died in the Hospital exactly twenty-four hours before the time the letter was posted. The lady who wrote the letter had not been up to see her brother for a fortnight, and there is no reason for thinking that she knew that he was likely to die at the time at which she wrote the letter.

Notice.

The paper entitled "Concussion Wounds of the Eyes," published in the Gazette of June 16th, was written by Captain A. W. Ormond, F.R.C.S.

Periodicals received.

St. Bartholomew's Hospital Journal, The Hospital, The Nursing Times, St. Mary's Hospital Gazette, The Middlesex Hospital Journal.

A Case of Spontaneous Diffuse Osteomyelitis of Frontal Bone.

Towards the end of February of this year there came to Throat Out-Patients a boy of 16 years, Wm. B., "because of his face," as he tersely put it, and certainly, from superficial observation, he had ample grounds for seeking advice. His left eye was absolutely closed by a puffy swelling and his right was becoming involved rapidly, so that he found it extraordinarily uncomfortable to walk about with his head back and face almost horizontal in order to get a glimpse of his surroundings from under his fast swelling right eyelids.

The history of his malady obtainable at the time was almost as terse as his complaint—namely, that earlier in the week he had had some pain in his head, and subsequently his face had swelled and that now the pain was gone. However, in the light of after events, a rather more satisfactory history was subsequently elicited. He had occasionally had bouts of epistaxis, and two months previous to his advent at Out-Patients he had been seized with "influenza," in which he had suffered considerable head pain, fever and general malaise. This attack passed off in 10—14 days, leaving him quite well apparently. A fortnight before he came up he developed a cold in his nose which "turned to influenza," causing even more severe headache and malaise (but he had not noticed any great nasal discharge). This attack lasted on and off for ten days, when quite suddenly the headache intensified and localised in the frontal region—pain of a throbbing variety and preventing him from getting any sleep, causing him to feel more than ordinarily feeble, lose his appetite, and driving him to bed. For two days this pain lasted without alteration till one morning (two days before admission) he observed that his left eyebrow was puffy and his eyelids were fuller than usual on that side. That night the swelling rapidly spread, and with it the pain vanished, so that he slept well and came up to Out-patients for the swelling rather than the pain which had been.

On examination it could be seen that there was a puffy swelling obscuring the left eye, but not extending down on to the face, involving the bridge and both sides of the nose, passing on to the upper right eyebrow and eyelid, and reaching upwards on the forehead to the roots of the hair over the left eyebrow; the swelling was of a curious dusky, if anything faintly bluish tinge, shiny, pitting easily, and had a semi-translucent appearance. The boy complained of no pain, subjectively or objectively, as it were. He did not greatly mind being handled in examination. There was no nasal discharge, but a little pus could be seen in the middle meatus of nose. His temperature was 100·4°, and did not show signs (during five hours) of rising at all; his pulse and respiration corresponded with the degree of pyrexia. The urine contained the merest trace of albumen and was of the febrile type, dark coloured and with thick precipitate of urates. There were no adventitious sounds in his chest and his heart was sound.

Mr. Mollison, who saw him at Out-Patients, diagnosed acute frontal sinusitis. The boy was admitted into Job, and five hours later was on the operating table. Under ether anæsthesia, Mr. Mollison proceeded to expose the left frontal sinus, expecting to find pus outside or inside the pericranium as well as a pus-ridden sinus. An incision was made over the sinus along the inner part of the supraorbital ridge and very œdematous subcutaneous tissue observed: the pericranium was exposed and seen to be rough, incised and stripped from the bone—this was performed with abnormal ease but no sign of pus, and the outer table of the frontal bone gave no evidence of necrosis nor

leaked pus—this outer table was cut away with a chisel and the frontal sinus found to contain a small amount of pus, and, after cleaning out the sinus and enlarging the opening into it, it was seen that the edges of the cut diploic bone were exuding pus and at once shewed that the condition of osteomyelitis was present. Preparations were now made for a prolonged operation; the primary incision was carried across the bridge of the nose and out along the supra-orbital ridge to the external angular process of the frontal bone on the left side, the pericranium stripped back extensively and bone nibbled away with punch forceps in widening rings, always to find a further and further spread of pus containing bone; the dura, soon exposed, was seen to be healthy, as also, throughout, was the outer table of the bone. The incision had again to be enlarged, reaching across to the right external angular process and the forehead flap split sagittally in the middle up to the region of the hair roots; the two triangular flaps retracted gave very free exposure, and bone was punched away piece by piece until, fortunately, healthy diploic bone was finally reached: but not until an extent of frontal bone from left to right external angular processes, including both frontal sinuses, and reaching for just over two inches vertically above the nasion had been removed. In a downward direction the disease had been traced into the nasal bones, over the eyes in the front half of the orbital plates of the frontal bone and down into the ethmoidal cells of both sides, necessitating free removal of all these parts. The raw edges of the bone were dabbed all round with pure phenol, and the cavities and the dura freely irrigated with 10 volumes hydrogen peroxide; finally the cavities and the dura were covered with gauze roll and the skin flaps allowed to fall down on to this dressing, the whole then enclosed in copious dressings. The operation was completed in just under two hours.

In spite of the severity of the operation the boy was particularly fit, his temperature fell to normal in about four days, and, except at one point, never again rose. He was dressed daily with stringent aseptic precautions, and owing to the anæsthetic condition of the skin flaps, due to cutting of both supraorbital nerves, he was able to bear what would otherwise have been almost unsupportable. In twelve days no sign of recurrence, spread, nor separation of small sequestra being observed, the skin flaps were allowed to fall back on to the dura (the day following temperature rose to 101°, but fell again in 24 hours and remained down). Two weeks later, under an anæsthetic, the flaps were raised again, and secondary suture into approximately normal apposition was performed. The boy was allowed up and about even before the stitches were removed.

Six weeks after his admission he was able to have both eyes uncovered, and then noticed that he had diplopia. It was seen that he had an internal strabismus of the left eye; the double vision worried him at first, but according to the latest reports he has quite got over this trouble, having regained control over his left eye, except when very sudden alterations in direction are performed. His present condition is by no means pitiable, for he has escaped with his life and the disfigurement is not repulsive. The forehead is flattened rather abruptly from the bridge of the nose to the roots of the hair, is slightly pulsatile, and has a triradiate scar of which the lateral limbs are somewhat hidden by new-growing eyebrows. Mr. Mollison, when exhibiting him recently at the Laryngological Society, elicited, in the course of the discussion, that it was possible for the frontal bone to reform to some extent from the intact pericranium, and that therefore the disfigurement is likely to decrease with time.

The chief point of interest in this case is its rarity, and, further, the recovery of the patient

so completely. Dan Mackenzie, in the *Journal of Laryngology* (1913) has collected from the literature, German, French, American and English, all the published cases since 1897, in which year the disease was first recognised as an entity; and in this time only 45 cases are recorded, of which number 21 were of the spontaneous variety, the others being post-operative in onset. Mackenzie says: "The numbers recorded are no indication of the frequency of the disease; on the one hand, spontaneous osteomyelitis, when fully developed,

is sufficiently striking to secure recognition and sufficiently rare to lead generally to its publication, but on the other hand we must remember that many cases are regarded as primarily intracranial which are in reality cases of osteomyelitis." In other words, the number 21 for spontaneous osteomyelitis stands for those cases only in which the disease dallied long enough in the bone to be recognised, and does not include those in which infection went so fast through the bone that a very local (and therefore hardly "diffuse"!) osteomyelitis was overlooked at the autopsy, if, indeed, it ever existed. The other side of the question—the post-operative diffuse frontal osteomyelitis—may very well be understated, for the record of each case depends on the candour of the surgeon, and it seems probable that in fifteen years more than two dozen cases must have occurred, if only it were possible to obtain the figures.

There does not seem to be any satisfactory explanation as to why the disease is so rare or why it almost invariably starts in the frontal sinus and not in the ethmoidal or sphenoidal cells. It is suggested that in the two latter cases the infection gets through the thin bone so rapidly that the intracranial complications alluded to above fill the picture. Again, when bone infection occurs in the frontal sinus, as is quite usual, the process is localised, discrete, self-limiting to the area of the sinus—a localised osteomyelitis—so that the diffuse variety is thought to occur only in those patients with peculiarly low local resistance or who are attacked with a particularly virulent infection. However, though one feels more comfortable to have an explanation for a phenomenon, yet when that explanation depends on such a nebulus quantity as "resistance," we have hardly advanced a step, and certainly have gained no assistance towards prophylaxis or treatment.

Of the number of recorded cases, death occurred in all the post-operative variety, but seven of the spontaneous group survived after adequate surgical interference, which consists in taking the case early and removing all visible diseased bone with a margin of healthy bone all round, regardless of extent or appearance. This case bears out the efficacy of such treatment.

In conclusion, we wish to thank Mr. Mollison for his permission to publish the case, his advice, and the references to the literature.

L. S. D.

Guy's Hospital.

Air Raids.

I. General Instructions.

1. All patients must be got under cover. In-patients who are up and about must be sent to their wards. Stairs and gangways must be cleared of all loiterers. Students must not congregate in the Surgery or Out-Patient Departments.

2. The *lifts* will be used solely for the conveyance of injured persons. One of the "surgical" lifts will be kept at the subway level by a porter (between 7 a.m. and 7 p.m.; at night by a senior student). It will be his duty to take the patient to the desired floor, and immediately return to the subway level to await the next casualty; he may not leave the lift. The surgery lift will be worked similarly, by a student, and also the "medical" lift, if it becomes necessary to admit cases to the medical side.

3. *Important messages* will be sent by messenger, not by telephone.

II. The Surgery.

4. The *Surgery Staff* will consist of:—The Take-in Dressers, the Dressers on duty, assisted by all who hold appointments senior to that of Dresser, and the Ward Clerks of the take-in firm.

5. A *tally label* will be tied to each patient, and before he leaves the Surgery the *particulars must be fully entered thereon.* One of the Surgery porters will be detailed to collect all the tallies from patients sent out, whilst *in the case of patients who are admitted the tally must be sent from the ward to the Front Lodge as soon as possible.* It is extremely important that correct information as to admissions should be available within a few minutes of the raid.

6. *Treatment* in the Surgery for patients about to be admitted will be restricted to the arrest of hæmorrhage, the relief of shock, and the administration of restoratives. The removal of clothing, and the careful dressing of the wounds, should be left till after the patient has been admitted. Persons suffering from shock or fright may be sent from the surgery to an available room in the Out-Patient Department, and will not be discharged till they have been seen again by a medical officer.

7. Morphine will be injected in all cases in which pain is severe, but only on the order of the medical officer. The fact that an injection has been given must be noted upon the tally for the information of the wards. Syringes, ready charged, are kept in Sister's room.

III. Distribution of Casualties.

8. Every Ward Sister in the Hospital will send to the Surgery, at 9 a.m. and at 9 p.m., a list showing (1) the number of beds actually vacant, and (2) the maximum number of possible vacancies in case of emergency. This list will be kept posted in the surgery lift, and as each case is dispatched to the wards the figures will be corrected by the lift porter.

9. In order to avoid congestion of wards, and unequal distribution of work, the cases will be sent into the wards in rotation, one case to the first ward on the list, one to the second, and so on. In this way, all wards will receive an equal amount of work; there will be a better chance of giving detailed attention to the patients; and no ward will receive a second case until a reasonable time has elapsed since the arrival of the first. The order in which the cases are admitted will follow, accurately, the list of wards and beds posted in the surgery lift.

10. *Stretchers* will be returned as quickly as possible to the Surgery, and stored in the subway.

IV. The Wards.

11. Each firm, other than the taking-in firm, will be on duty in their respective wards in readiness for the casualties as they arrive. Every Ward Sister will make all necessary preparations to receive patients, and to treat shock, as soon as the Air Raid Warning is received.

12. If necessary, Assistant Surgeons' Dressers should be asked to assist with the dressings.

13. In all *severely wounded cases*, the treatment of the shock should be the first consideration, and as soon as it has been ascertained that no hæmorrhage is going on, interference with the patient should be reduced to the absolute minimum. The performance of operations, or of elaborate dressings, should be left till later.

14. Sisters will send the *tally-labels* to the Front Lodge at earliest possible moment. No other notification of admission is required.

15. An injection of 500 units of *anti-tetanus serum* will be given to all casualties, and one man will be told off to go round and give these injections.

E. C. PERRY,
June 16th, 1917. Superintendent.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Dysentery.

CLINICAL LECTURE BY Dr. A. F. HURST.

Gentlemen,—Dysentery is the generic name originally applied to cases of colitis, in which frequent stools containing blood and mucus were passed and tenesmus was present. The discovery of the *Entamœba histolytica* and the *Bacillus dysenteriæ* resulted in the differentiation of amœbic and bacillary dysentery, which are now known to be distinct in their geographical distribution, morbid anatomy, and to some extent in their symptoms, and to require distinct treatment. The modern tendency has been to restrict the term dysentery to infective colitis caused by these organisms, even if no blood and mucus are passed and no tenesmus is present. It is, however, more logical to include all forms of infective colitis, in which blood and mucus may be passed and tenesmus may occur, as the disease produced by certain other protozoa closely resembles amœbic dysentery, and there is a greater similarity between the morbid anatomy of the ulcerative colitis, which occurs sporadically in England, and chronic bacillary dysentery than between bacillary and amœbic dysentery.

Amœbic Dysentery.*

Amœbic dysentery is common in tropical and sub-tropical countries. It had never occurred in epidemic form in Europe until the summer of 1915, when nearly every soldier in the British army at Gallipoli suffered from it, and a large proportion of the thousand sick men who were daily removed from the Peninsula during August and September had amœbic dysentery. It was less common in October, and the cold and rain in the great gale at the end of November was quickly followed by the disappearance of the epidemic. The disease was probably brought to Gallipoli from Egypt, where at least 13·5 per cent. of healthy natives are carriers of the infection. A comparatively small number of cases occurred at Salonica in the summer of 1916, mostly in troops who had been in Gallipoli or Egypt.

Amœbic dysentery first appeared in France in September, 1915, and though it is still rare, the number of cases has steadily increased, both among British and French troops. The infection was introduced by carriers from India, Morocco, and Senegal; the arrival of troops from Gallipoli led to a fresh source of infection in 1916, and the disease has now spread to men who have never seen service out of France.

Parasitic amœbæ — entamœbæ — are distinct from the non-parasitic amœbæ of the soil and water in their morphological characters. They have not yet been cultivated artificially, and they become parasites in the intestine when given by mouth, whereas the non-parasitic amœbæ can be cultivated, but disappear spontaneously from the fæces within a week of being swallowed.

There are three varieties of entamœbæ, which are structurally distinct; two—the *Entamœba coli* and the recently isolated *Entamœba nana*—are harmless parasites, found in the stools of many normal individuals, and the other *Entamœba histolytica* (or *Entamœba dysenteriæ*)—is the cause of amœbic dysentery. The *Entamœba coli* produces no lesions when given to kittens by mouth, but the *Entamœba histolytica* produces characteristic ulcers in the colon and abscesses in the liver, which contain the pathogenic amœbæ, but no bacteria.

Different forms of the entamœba of dysentery have been described. Wenyon, a Guy's man, who is the greatest living authority on intestinal protozoa, has now definitely proved

* Bacillary dysentery will be described in the next lecture.

that the large form which invades the tissues, and the *Entamœba minuta*, which lives like the *Entamœba coli* on the surface of the mucous membrane, are really two forms of a single organism, the *Entamœba histolytica*. The large form is the only one found in the stools of acute dysentery.

When the acute symptoms abate, the *Entamœba minuta* replaces the large form. Both forms reproduce by simple division, but some of the former cease to multiply, become spherical and encyst themselves by secreting a transparent shell. The cyst is completely passive and is excreted in the fæces. Its single round nucleus divides into two and then into four. The four nuclei, on account of which it has been described as the *Entamœba tetragena*, distinguish it from the cyst of *Entamœba coli*, which contains eight nuclei and is generally larger. The difference between the cysts is of great importance, as the active stage of the minuta form of *Entamœba histolytica* closely resembles that of *Entamœba coli*.

The active forms of *Entamœba histolytica* die too quickly outside the body to take any great part in spreading the disease. Amœbic cysts survive many days in moist fæces and in water; the infection can therefore be carried in particles of fæces, which are moist inside though dry outside, and pieces of paper or leaves contaminated with moist fæces, and in contaminated drinking water. As the cysts are rapidly killed by drying, they cannot be carried in dust.

Wenyon's investigations have shown that flies are the most important means of spreading the disease. They ingest fæces, which they begin to excrete within half an hour, and in twenty-four hours the excretion is almost complete. If the fæces contain amœbic cysts, the latter can be found during the whole of this period in the intestines of the fly. As a fly generally defæcates whenever it ingests food, it deposits fæces containing amœbic cysts on any human food upon which it settles, if it has had access to infective fæces in the preceding twenty-four hours. A considerable number of house-flies caught by Wenyon in different parts of Alexandria, including one caught in a cookhouse, deposited fæces containing cysts of *Entamœba histolytica* and *Entamœba coli*. The infection is rarely if ever carried by the fly on its legs, body, or proboscis, as it cleans itself after leaving the fæces, and the traces still left dry so rapidly that no amœbic cysts could survive long enough to be deposited on food.

The stools of convalescent and contact carriers are a more fertile source of infection than those of patients already suffering from dysentery, as the encysted amœba is present in largest quantities in the formed stools of patients, who have recovered from dysentery — convalescent carriers, and of individuals who have never had definite dysenteric symptoms, the disease having been latent or the submucous tissue having entirely escaped invasion. Fatal dysentery can be produced in cats by feeding them on the cyst-containing fæces of healthy carriers, who have had no symptoms of dysentery.

Owing to the extreme frequency of defæcation, soiling of the patient's clothes and skin is common, and hospital attendants may infect themselves if they are careless about washing their hands. Defective personal hygiene is a frequent cause of the spread of the disease in camps, as the hands are likely to be soiled with infective material in the latrines, and if they are not thoroughly washed, the food becomes contaminated.

The cyst wall is unaffected by the gastric juice, but is digested by the pancreatic juice. Each of its four nuclei develops into an active amœba, which burrows from the lumen of the

colon through the mucous membrane into the submucous tissue.

Infection may at once lead to an attack of dysentery, or the individual may become a carrier and either remain healthy though still a carrier for six months or more, or he may eventually develop dysentery.

Morbid Anatomy.—The essential lesion in amœbic dysentery is an inflammatory round-celled infiltration of the submucous tissue of the colon, caused by the invasion of the amœbæ. The proximal part of the colon is first involved and even when the whole colon later becomes affected, the disease is generally most advanced in the cæcum. The appendix is occasionally affected, but the ileum is always spared.

Small raised red dots first appear as a result of congestion of the mucous membrane over an area of submucous infiltration; the centre of the congested area soon becomes necrotic and yellow, and the necrotic tissue finally disappears, leaving a spreading ulcer with an overhanging margin and the infiltrated submucous tissue as its base, or a flask-shaped cavity containing pus. The affected areas are greatly thickened and are raised above the adjacent mucous membrane, which remains comparatively healthy; even in the severest cases areas of normal mucous membrane remain, especially in the distal half of the colon. In the worst cases black sloughs of necrosed mucous membrane, which may be several inches in diameter, separate, and are passed in the stools, or are found after death attached here and there to the edge of a large ulcer. In these cases the amœbæ pass between the muscle fibres to the subserous coat, and the round-celled infiltration extends to the muscular coat and peritoneum, which is covered with purulent fibrinous patches. The amœbæ may invade the small submucous veins, by which they travel to the liver, where they give rise to inflammation and suppuration. In rare cases abscesses also form in the brain and spleen. I saw two cases in Salonica, in which all the symptoms of cerebral abscess were present; both patients had had dysentery at Gallipoli, and rapid and complete recovery followed treatment by means of emetine injections. It seems probable that they were suffering from amœbic encephalitis, corresponding with the hepatitis which precedes the actual formation of an abscess in the liver.

Symptoms.—The incubation period may be as short as forty hours.

The onset is sometimes acute, but in a considerable proportion of cases the disease begins as chronic diarrhœa or as diarrhœa alternating with constipation. In acute cases ten to twenty or even more stools are passed a day. When the disease has fully developed, blood and mucus are almost always present in the stools, which consist of a few drachms of greenish yellow or dirty brown mucus, or a grey muco-purulent mass, suspended in semi-fæculent or serous fluid, which is often blood-stained; the blood is either intimately mixed with the stool or is present in streaks. In other cases large separate fragments of mucus stained bright red are seen.

If a microscopical examination is made within half an hour of the passage of a stool, active amœbæ can generally be found without difficulty in the blood-stained mucus, but they may also be present in mucus without obvious blood and in watery stools free from blood and mucus.

Griping pains, which are worst shortly before and during defæcation, are always present to a greater or less extent across the lower part of the abdomen. Tenesmus, the painful bearing down and straining sensation, which occurs during and for some time after defæcation, is common, but it is only severe if the rectum is ulcerated.

The thickened colon can often be felt, especially in the right and to a less extent in the left iliac fossa, as a very tender tumour; when the cæcum is chiefly involved, appendicitis may be simulated.

Constitutional symptoms are generally slight and, apart from complications, fever is either completely absent or low and intermittent, even in acute cases.

In the fulminating gangrenous type of amœbic dysentery the patient passes very numerous stools, which often consist of blood with a little mucus, but no fæces. When extensive gangrene occurs, the colon may become paralysed, and only a few stools containing black sloughs are passed. Abdominal pain is severe, and palpation shows that parts of the colon are greatly thickened and extremely tender. In such cases perforation and general or local peritonitis may occur.

Mild and unrecognised amœbic dysentery is a not uncommon precursor of hepatic abscess; a history of slight diarrhœa without the passage of blood, often alternating with constipation and sometimes accompanied by pain in the right side of the abdomen, is obtained. The comparatively mild symptoms are probably due to the lesion being confined to the cæcum and ascending colon, which may be tender and slightly thickened. In such cases amœbæ are difficult to find in the stools, unless frequent search is made for a little blood-stained mucus. The diarrhœa, which was common among the troops at Gallipoli, was probably in many instances a mild form of amœbic dysentery. The disease may even be completely latent, ulceration being found post-mortem in patients dying from amœbic abscess of the liver or from some intercurrent disease.

Diagnosis.—In any neighbourhood in which dysentery is known to occur, every case of diarrhœa should be regarded as a possible case of dysentery, and if blood or mucus or both are passed or if tenesmus is well marked, it should be regarded as a probable case of dysentery. Other causes of similar symptoms, the most important of which is a growth of the pelvic colon or rectum, should not be forgotten; I found an inoperable growth in the rectum of a governess sent home from Persia for what was supposed to be chronic dysentery, and I saw a case in Lemnos, in which a man with a similar growth had been treated for some weeks with emetine. A careful inquiry into the history and in doubtful cases a rectal examination should prevent such a mistake being made.

If symptoms of appendicitis occur in a patient in whom there is a possibility that amœbic dysentery is present, the stools should be examined for amœbæ, and the effect of emetine injections should be tried before advising operation, except in severe cases, in which the delay caused by failure of the treatment might prove dangerous.

The clinical differentiation of amœbic and bacillary dysentery will be discussed after the symptoms of the latter have been described. A definite diagnosis can only be made by the discovery of the *Entamœba histolytica* in the stools.

Although an amœba with refractile ectoplasm clearly differentiated from the granular or vacuolated endoplasm, an indistinct nucleus, and active movement is generally the *Entamœba histolytica*, its characteristics vary so much that it may be quite indistinguishable from the *Entamœba coli*, in which the distinction between ectoplasm and endoplasm is not present, the nuclei are distinct and the movements very sluggish. The inclusion of red corpuscles is, however, conclusive evidence in favour of *Entamœba histolytica*, and Wenyon and O'Connor suggest that no acute case of dysentery should be diagnosed as amœbic un-

less amœbæ containing red corpuscles are found, as they are almost invariably present, or characteristic cysts containing one, two or four nuclei are present in association with amœbæ, the general characteristics of which are suggestive of *Entamœba histolytica*.

In extensive epidemics in war time, when it is impossible to examine the stools of every patient microscopically, treatment with emetine should at once be instituted in cases arising in a district, in which the disease is known to have occurred; rapid improvement can be regarded as almost conclusive proof of the amœbic origin of the dysentery.

Prognosis.—The amœbic dysentery at Gallipoli "lowered vitality more than it destroyed; it was the universal sickness, not the occasional death, that mattered." It was probably the deciding factor in the failure of the campaign. If emetine is promptly given, death should hardly ever occur. When treatment is delayed the prognosis is less good, and the actual dysentery is likely to be followed by chronic colitis, which may persist for many months. Incontinence of fæces, persistent vomiting, hiccup and the passage of sloughs are the most serious symptoms.

Prophylaxis.—Neither chlorination nor the addition of acid sodium sulphate tablets to water destroys encysted amœbæ. All drinking water should, therefore, be boiled when amœbic dysentery is prevalent, and no raw vegetables in the form of salads, and no raw fruit unless it is carefully peeled should be eaten. In severe epidemics a gelatine capsule containing gr. 1 of emetine bismuth iodide, which does not cause any digestive disturbance in some individuals, or a smaller dose if this cannot be tolerated, should be taken after food once a day in order to destroy any amœbæ which may be swallowed, before they have time to penetrate the mucous membrane of the colon. Every case of diarrhœa lasting for more than twenty-four hours should be regarded as possibly due to dysentery.

Dysentery wards should be fly-screened, and the stools should be disinfected at once and destroyed as quickly as possible. A patient who has had amœbic dysentery should not be allowed to return to his unit, until he can take a full diet without getting diarrhœa and his fæces have contained no blood, mucus or amœbic cysts for a fortnight. He should still be given emetine after his apparent recovery, as described under the heading of treatment.

The fæces of all troops should be passed into dust- and fly-proof receptacles containing cresol, and whenever possible they should be incinerated; failing this they should be deeply buried. However thoroughly this is done, flies will continue to carry infection from the fæces of native carriers. Camps and hospitals should, therefore, be situated as far away as possible from native quarters, and natives found defæcating in the open near a camp should be punished. Large fly-traps should be kept at the entrance to cook-houses, messes, and canteens, all of which should be protected by fly-proof netting. As in spite of these precautions flies are certain to enter, all food should be kept covered. Special attention should be paid to the health of cooks, and no man should be allowed to have anything to do with the preparation of food if he is suffering from diarrhœa. Before leaving their wards medical officers, nurses, and orderlies, who are looking after dysentery cases, should wash their hands with cresol (1 in 10), which is the best antiseptic for destroying amœbic cysts.

Treatment.—In both amœbic and bacillary dysentery the patient should be kept warm in bed until the diarrhœa ceases. The diet required is the same for both infections. It should be entirely fluid at first, and in very

acute cases nothing but barley water, albumin water or whey should be allowed for twenty-four hours. With this exception it should consist in the early stages chiefly of milk, citrated by the addition of two grains of sodium citrate to each ounce. Milk soured by a pure culture of lactic acid bacilli is very useful when available, especially after the acute symptoms have abated, and for the diarrhœa due to post-dysenteric colitis, as it renders the conditions in the colon unfavourable for the development of dysenteric and putrefactive organisms. Arrowroot and cornflour made with water and sweetened can be given from the onset; when improvement occurs it can be made with milk, and custard, thick purées of potatoes, peas or lentils, and milk puddings may also be given. Meat extracts should be avoided. When the stools begin to be formed, the diet can be gradually increased.

Directly the diagnosis has been made by the discovery of the *Entamœba histolytica* in the stools, gr. 1 of emetine hydrochloride should be injected subcutaneously, and gr. 1 injected once daily for the next twelve days. In very severe cases gr. $\frac{1}{2}$ to 1 dissolved in 5 c.c. of normal saline solution should be injected intravenously, and in somewhat less severe cases gr. 1 can be given subcutaneously twice a day for as long as may be necessary, but there should be an interval of a few days after each period of twelve days. The amœbæ, blood and mucus generally disappear from the stools between one and six days after the first injection. In the rare cases of amœbic dysentery, in which emetine fails more or less completely, a mixed infection is certainly present, and antidysenteric serum should be given in addition to the emetine. It is unnecessary to persevere with emetine until the stools are solid, as after the blood and mucus have disappeared the stools may remain loose for a time owing to the post-dysenteric and non-specific colitis still present. They may rapidly become solid on discontinuing the emetine, which apparently acts as a mild intestinal irritant. If any blood or mucus reappears in the stools, gr. 1 of emetine hydrochloride should be injected every night for six nights; it is unusual for more than one such relapse to occur

In very exceptional cases emetine has seemed to cause shortness of breath and irregularity of the pulse in patients who are not kept in bed, but these symptoms always disappear after a few days rest. Cases have been recorded of death from cardiac failure from emetine poisoning, but in all probability death was really due to the intestinal toxæmia.

As amœbic cysts are often still present in the fæces of patients who have apparently recovered from an attack of dysentery, it has been supposed that active amœbæ may develop from the cysts and cause a recurrence of symptoms if the patient's general health is depressed or his colon is irritated, and that a chronic infection of this sort may give rise to amœbic hepatitis or abscess of the liver. Wenyon and O'Connor have, however, shown that this is not the case, as cysts do not liberate active amœbæ anywhere but in the small intestine. But the presence of cysts in the fæces indicates that free amœbæ must be present in the colon, and it is these which are a source of danger to the patient. From the patient's point of view it is the cyst-forming amœbæ rather than the cysts themselves which require destruction. It is, therefore, of comparatively small importance that amœbic cysts are very resistant to emetine, as, if the drug is properly administered, the amœbæ which produce the cysts are destroyed, and the cysts disappear from the fæces. The frequently expressed view that some cases of infection with *Entamœba histolytica* do not respond to treatment because only the resistant cysts are

present in the intestine is thus incorrect. It is only when the cysts have been excreted in the fæces that their destruction becomes a matter of great importance in order to prevent the spread of the disease.

It is exceedingly difficult to eradicate the infection in chronic carriers by means of emetine injections. The cyst-producing amœbæ appear to be shut off from the circulation and are therefore more readily destroyed when the drug is given by mouth. In order to avoid the emetic action of ipecacuanha one grain of emetine bismuth iodide is given in gelatin capsules three times a day after meals for two or three weeks; compressed and keratin-coated tablets are less useful, as they are often passed unchanged in the stools. This daily dose is equivalent to one grain of emetine hydrochloride and one drachm of ipecacuanha. Nausea and diarrhœa are often produced, and it is therefore important to see that the patient really takes the drug. Vomiting may also occur, but the dose should not be reduced, as tolerance is often quickly established, especially if the patient makes an effort to restrain the desire to vomit, and when this is impossible, it can generally be overcome by giving m. x. of chlorodyne half an hour before the drug is taken. If it persists, the patient should remain in bed until the course of treatment is completed, and a mustard plaster should be applied to the epigastrium.

When pain is excessive, especially if it causes insomnia, and when very severe diarrhœa persists in spite of treatment and is leading to exhaustion, which would probably be fatal if it continued, a hypodermic injection of a quarter to half a grain of morphia should be given and repeated, if required, every four hours, with the addition of a hundredth of a grain of atropine. I have found charcoal very effective in diminishing the frequency of defæcation and in deodorising offensive watery stools: at the same time flatulence, which is often excessive and is the chief cause of colicy pain, is greatly reduced. Half an ounce of charcoal to a teacupful of sweetened arrowroot makes a palatable food; it should be given three times a day in the more acute stages, and a single dose should be given last thing at night as long as the stools remain soft.

If excessive diarrhœa results in collapse, three or four pints of hypertonic saline solution (gr. 120 to the pint) should be injected intravenously. In less urgent cases, normal saline solution (gr. 90 to the pint) may be injected subcutaneously. According to French observers the collapse is sometimes due to suprarenal insufficiency; in such cases, which can be recognised by the very low blood-pressure, the subcutaneous injection of seven minims of adrenalin chloride (1 in 1000) every three or four hours is of the greatest use.

Since the treatment has become so much more effective as a result of using emetine subcutaneously, neither appendicostomy nor any other operation ought ever to be necessary.

Change of Address.

Major T. F. Browne, D.S.O., R.A.M.C., from Military Hospital, Bulford, to No. 3 Australian General Hospital, A.I.F., France.

Surg.-Prob. C. R. Cade, from H.M.S. *Beaver* to H.M.S. *Legion*

Lieut. R. Curle, R.A.M.C., Lady Carnarvon's Hospital for Officers, 48, Bryanston Square, London, S.W.

H. J. Spon, M.R.C.S., L.R.C.P., from 48, Queen Anne Street, Cavendish Square, W., to 61, Harley Street, W. 1. *Tel.*—Mayfair 2712.

E. L. Martyn Lobb, M.S., F.R.C.S., from 11, King Street, Maidstone, to 66th General Hospital, B.E.F., Salonika.

Lieut. H. S. Wacher, I.M.S., c/o Messrs. Thos. Cook & Son, Cook's Buildings, Hornby Road, Bombay.

Lieut. O. V. Payne, R.A.M.C,, Ripon Training Centre, No. 3 Camp, Blackpool.

A Case of Muscular Dystrophy.

Walter T., aged 50, was admitted on March 21st, 1917, into Addison Ward suffering from weakness of his legs, He was an engineer by trade, and had always been well and strong until eight weeks before admission, when he noticed that his legs were becoming weak. He began to have increasing difficulty in walking, especially in going up-stairs, and had several falls. He felt no pain, and suffered no other inconvenience of any kind.

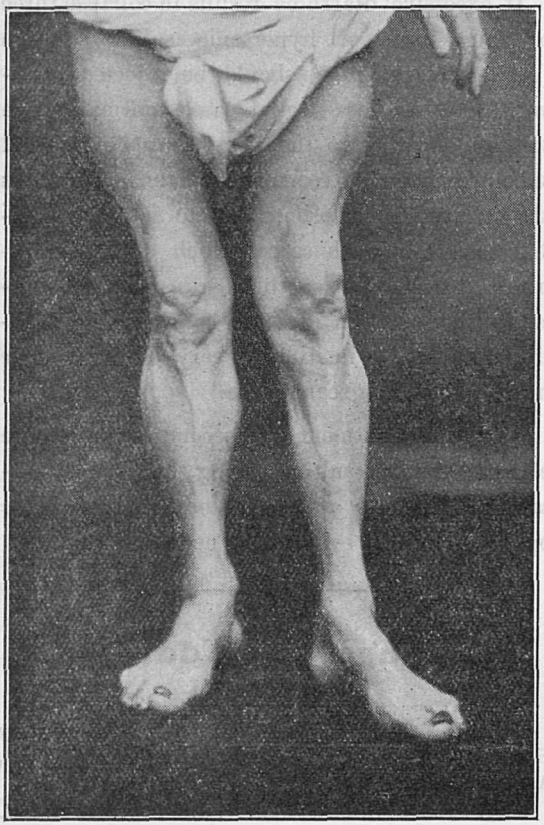

FIG. I.

On examinations, his legs showed hypertrophy of the calf muscles on both sides, and of the peroneal muscles on the left side. The quadratus femoris on the right side was very much wasted in its lower half, but the upper part of the muscle seemed rather large. These points are well brought out in Figure I. The arm and shoulder girdle muscles were also affected, but not to so marked an extent. There was wasting of the right deltoid, but the infraspinati and supraspinati on both sides were markedly hypertrophied.

When the patient was admitted into the Hospital he had great difficulty in walking without assistance from sticks. He kept his legs widely apart and displayed considerable lordosis, as may be seen in Figure II. The grip of both hands was good, and there was no sign of any wasting in the small muscles of the hand. His knee and ankle jerks were normal, but the plantar reflex on both sides was definitely extensor in character. When the patient lay on the floor upon his back and was told to get up,

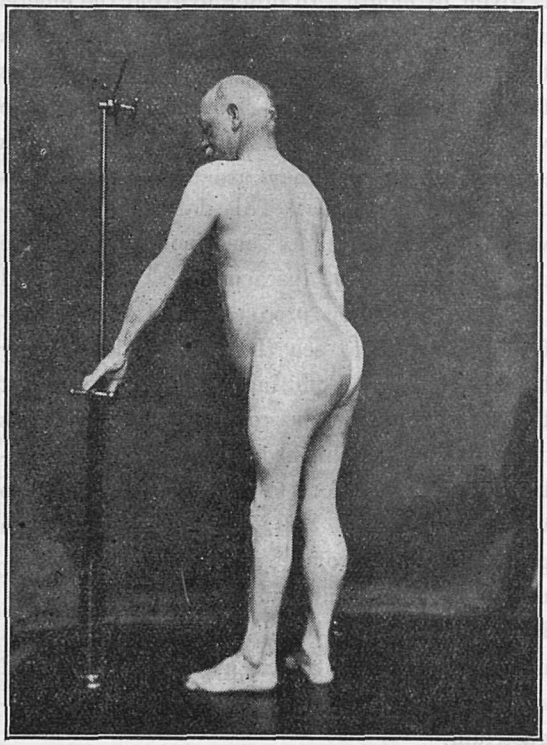

FIG. 2.

he did so in the manner characteristic of a patient with muscular dystrophy. After rolling over on to his hands and knees, he dragged his hands along the floor towards his feet until the knees became flexed at a right angle. Then he shifted his hands up to his knees and proceeded to extend his hip-joints by climbing up his thighs.

The patient was seen both by Dr. Hale White and Dr. Hurst, both of whom admitted that they had never seen quite a similar case. They both considered the case to be one of pseudo-hypertrophic muscular dystrophy in spite of the difficulties in the way of this diagnosis. One of these was the fact that no family history of the disease could be obtained, and also the fact that symptoms had come on so very late in life. Another point of great difficulty was the presence of the extensor reflexes. Apart from this sign there was absolutely nothing to suggest any trouble in the upper neurone. Dr. Hurst suggested that the myopathy had affected the flexors of the big toe more than the extensors, and that therefore the normal balance between these muscles had been upset. In consequence a stimulation which would normally produce a flexor in this case provoked an extensor response.

During his stay in Hospital the patient's general health was attended to, and his mouth cleared of septic stumps. On his discharge the condition of his muscles was much the same as on admission. We are indebted to Dr. Hale White, under whom the patient was admitted, for permission to publish this account of him.

University of London,

Sir E. Cooper Perry, M.D., F.R.C.P., has been elected Vice-Chancellor of the University of London, in succession to Sir Alfred Pearce Gould.

J. W. H. Eyre, M.D., M.S., F.R.S. Edin., has been appointed Examiner in Public Health (Pt. I.) and Bacteriology (Tropical Medicine and Hygiene).

Honours for Guy's Nurses.

WE are pleased to record that the following Guy's Nurses have been awarded the Royal Red Cross :—

FIRST CLASS DECORATION.

Miss Gertrude Mary Allen, Acting Matron, Q.A.I.M.N.S. Guy's Hospital, Jan., 1898, to June, 1902.

Miss Lorna Beatrice Wood, Matron B.R.C.S., Montaza Palace Hospital, Egypt. Guy's Hospital, Feb., 1905, to April, 1908. Sister ditto, Feb., 1913, to March, 1914.

SECOND CLASS DECORATION.

Miss Gertrude Emily Custance, Acting Sister, Q.A.I.M.N.S.R. Guy's Hospital, April, 1897, to Aug., 1900. Guy's Institution to May, 1901.

Miss Constance Evelyn Strange, Acting Sister, Q.A.I.M.N.S.R. Guy's Hospital, Sept., 1909, to Dec., 1913.

Miss Dorothy Wilson, Acting Sister, Civil Hospital Reserve. Guy's Hospital, Feb., 1911, to Aug., 1914.

MENTIONED IN SIR DOUGLAS HAIG'S DESPATCH, MAY 1st.

Miss F. M. Hepburn, Acting Sister, Civil Hospital Reserve. Guy's Hospital, April, 1907, to May, 1910. Guy's Institution to Oct., 1914.

Miss F. E. Southcott, Staff Nurse, Civil Hospital Reserve. Guy's Hospital. July, 1911, to Aug., 1914.

Matron's Office,
Guy's Hospital, S.E.,
June 11th, 1917.

Honours.

Military Cross.

Temp. Capt. E. Biddle, R.A.M.C. For conspicuous gallantry and devotion. He showed great gallantry in supervising the removal of the wounded from a heavily shelled area. By his untiring energy and disregard of personal danger he saved many lives.

Capt. H. W. Evans, R.A.M.C. (Special Reserve). For conspicuous gallantry and devotion to duty. He showed the utmost bravery and zeal when commanding a stretcher-bearer division. He directed the bearers and tended the wounded in the open. By his exertion he secured the efficient clearing of the wounded over very big distances.

Territorial Decoration.

The King has conferred the Territorial Decoration on Major Peter Paget (att. E. Kent Regt.),

Foreign Decoration (Belgian).

Capt. M. Coplans, D.S.O., has been decorated Chevalier de l'Ordre de Léopold.

Guy's Hospital Dental Department and Military Service.

At the end of July, 1914, one of the largest of the special departments of Guy's Hospital, both from the point of work to be performed and the staff and dressers to perform it, was that connected with the care of the teeth.

On the right-hand side of the main entrance of the Hospital in St. Thomas's Street is a notice-board informing the passer-by that patients can be seen on any week-day from 9—9.30 a.m.; it might convey more to the lay mind if it stated that they were seen every week-day from 9—5 all the year round.

To go back three years, taking *a period of five months only, just before the commencement of the war*, apart from dental treatment for the medical and surgical cases with which the 643 beds in the Hospital are always filled, there applied for dental treatment at the Out-Patient Department 6,022 men, women and children, These cases were attended to by a staff of 24, assisted at that time by about 200 students, It should be pointed out here that the operation of treating and filling a tooth, if properly performed, is an operation of great delicacy, and as such has to be done by an individual who has had a great deal of preliminary training. This at once precludes nurses from rendering any help, and the only help that can be given by them is in the Out-Patient Department where the patients are first seen, and in the Extraction Rooms. The Staff have the superintendence of the Extraction Rooms, the diagnosis and prescription of treatment of serious and unusual cases, and the performance of a very small percentage, probably not more than 1 per cent., of the operations performed in the Dental Department. Thus it will be seen that the work itself is performed by the only other individuals available, viz., the Students.

As has already been mentioned, 6,022 persons applied for treatment during January–May, 1914. These cases were first seen in the Out-Patient Department, where the actual condition was diagnosed, and were then either drafted off at the same visit or a subsequent visit to the Extraction Room or to the Conservation Room, the room where teeth are treated with a view to saving them. Of course it is obvious that each patient might have to pay one, two, three, four, or more visits, and in the case of the regulation of children's teeth (this part of the Department has had to be closed down) the treatment might extend over a year or longer.

These attendances in the Conservation Room during the period of which mention has been made totalled no less than 17,939. During these attendances the work performed was as follows: Number of fillings, 5,783; number of other operations, excluding extractions, 2,679.

The number of cases treated under anæsthetics, both general and local, amounted to 2771, and those without an anæsthetic to 2,295. The number of teeth extracted amounted to 15,218, a fact which, when it is stated that no tooth is ever extracted if by the remotest chance it can be saved, is simply deplorable in the extreme.

At the start of the war the number of students —the essential part of the machinery for the treatment of these patients—was suddenly reduced from about 200 to 120, owing to men voluntarily joining up. Since that time the number of men has gradually diminished until there are now only fifty students (including three house-surgeons) left to deal with the work. The diminution has taken place by men gradually joining up, men qualifying and leaving the Hospital, and by the fact that no new students with one or two exceptions have taken their places.

The number of the Staff has been reduced from 24 to 10.

The statistics for the *five months just past* (*January–May, 1917*) may now be examined.

The applications for treatment at the Out-Patient Department are now somewhat reduced, doubtless due to the fact that it is generally known that the part of the Dental Department dealing with children's teeth has had to be closed down, and that the treatment for any dental trouble is unavoidably curtailed. Unfortunately, any similarity between the reduction of applicants for treatment and the reduction in the amount of treatment that can be given does not correspond in the least; the reason is obvious, a reduction in the machinery for the treatment by 75 per cent. reduces at once enormously the amount of treatment that can be given. The number of applicants for the second period had to be content with a much reduced treatment worked out in the following ways:—(1) A large number of patients could not be treated. (2) A great number had only partial treatment. (3) The remainder had complete treatment.

Another point that may be gained by comparing the relative figures is that, although the number of students has been reduced by 75 per cent., the ones remaining have by strenuous effort accomplished so much work that the amount of treatment has been reduced by only 39 per cent.

The complete figures of work performed for the two periods are here tabulated side by side, and form a most interesting study.

	Jan.–May, 1914.	Jan.–May, 1917.
Attendance in the Conservation Room	17,939	10,748
Number of Fillings	5,783	3,495
" other Operations ...	2,679	1,281
" Dentures	278	88
Extractions—		
1. Under Anæsthetics ...	2,771	2,784
2. Without " ...	2,295	712
Teeth extracted	15,218	11,955

The students left can be classified as follows: South Africans, 11; Irishman, 1; other nationalities, 3; discharged, 3; unfit, 6; under age, 3; house-surgeons, 3; liable for service at any moment, 20. These men are carrying on to the best of their ability the work that at the start of the war was carried on by four times their number. It would be as well to point out that a student *does not* receive a single penny for any work performed in the hospital; on the contrary he pays, and pays heavily, for the privilege of attending the hospital. Mention has been made of this fact because certain people of authority imagined that the reverse was the case, and also because the hospital recently received a separation allowance form from the Army Pay Department on which details regarding the salary of a student were to be filled up. The Staff appointments are honorary positions with the exception of the junior appointments which have only a nominal honorarium attached to them.

In the past and recently temporary exemption has been secured by the hospital authorities for the retention of dental students at the hospital, solely on account of the great service rendered by the department to the public.* To keep this service going students must be retained. Exemption is applied for on behalf of the public, and not on behalf of the student.

Of the men who have qualified since the start of the war who might have been doing serviceable work for which by education and training they are specially adapted, it is a most regrettable fact that some are in the combatant forces, others as orderlies in the Royal Army Medical Corps—presumably put in this Corps because of their connection with a hospital—cleaning windows and doing work of a similar description, and a few, but only a very few, have been given dental commissions. For the whole of the vast

* Since the above was written, the recent exemption given by the Southwark Tribunal to seven students has been appealed against by the Military Representative on instructions received from the War Office.

British Army there are under five hundred dentists. The proportion for the Canadian Forces is approximately ten times as large.

It is a fact that some of the Colonial Army Dental Corps have been largely employed in France in treating British troops, and it is now understood that even the dental services of our allies (*e.g.*, the United States) are to be employed in this way, whilst the services of our qualified dental surgeons—of whom there is a large body to call upon—are used for combatant work. F. B. B.

With the French Red Cross Dental Ambulances.

BY AN OLD GUY'S MAN.

PART IV.

THE sea front at Dunkirk is within ten minutes' tram ride from the centre of the town, and it is not called Dunkirk. In times of peace it is quite a jolly little "plage," and a favourite holiday ground of the burghers of Calais. The air is superb, the sands an ecstasy to the juvenile mind, and the bathing excellent when the jelly-fish are not too numerous. Needless to say that the war has sadly altered its appearance.

The rows of gay little villas, of a bizarre architecture only to be found in French and Belgian watering places, have missed their annual coat of paint since the war began. The hotels are put to many strange uses, and the Casino has been turned into a hospital. The winds and waves of three winters have drifted the sand high up on the "plage," and as no one has thought it worth while, or found the time to clear it away, it is not easy to tell where the plage ends and the sand begins.

There are still seats on the promenade, but you would not know it if it were not for the industry of the children, who have dug them out of six-foot sand-drifts. Even so they are not comfortable things to sit on, because the seats are on a level with the sand, and one is obliged to stick one's legs out straight in front. They have a lasting place in my memory, because on moonless nights I used to tumble over them and bark my shins and spoil my temper. But because those sands are quite the pleasantest place I know of on a hot summer night, I packed my baggage and left the Chapeau Rouge at Dunkirk, and took up my abode in a villa on the sea front.

That night the other members of the party sat in solemn conclave in the little garden, and denounced me for deserting our official address. Next day they packed their baggage and took up their abode in other villas on the same sea front. They arrived just in time to see me emerge from my first dip, and they promptly agreed that I had a reasonable excuse for my desertion.

Our wait in Dunkirk promised to become a repetition of the Paris delay; for what reason we could not discover. Every day we visited the Service de Santé or the G.H.Q. Every day we were told that our affair was under consideration, and that we might receive our orders at any moment.

I have already mentioned that whilst in Paris there was a question of accepting military rank, and in Dunkirk we received more than one hint that if we consented to this it would greatly help matters. So we decided to become attached to the French Service de Santé, and asked for honorary rank. Then arose the question of our professional status.

In France there exist two grades of dental surgeons, the medicin dentist and the chirurgeon dentist. The first is a doubly qualified man, though not in the same category as our conjoint. He ranks as a lieutenant. The second can only be described as a superior operator-mechanic, and he has the rank of "adjutant" or serjeant-major. We claimed that our English diplomas entitled us to be considered in the first category. I don't know if the Paris authorities thought otherwise, but they took a very long time to decide. In the meantime one of the members of our party who had been taken ill in Paris and had never properly recovered found that an operation was necessary, and asked permission to return to England. This was given, and he left Dunkirk a few days later.

It was a great loss to the party, because his knowledge of the language and people was invaluable to the expedition, and I fancy that it was entirely due to his persistence that we ever got any farther than Paris. After this we, the three survivors, settled down to a lazy existence at the seaside.

Our principal source of amusement was to walk out to the harbour and watch the natives fishing with dap-nets, a form of sport which is, I believe, peculiar to Flanders. The apparatus consists of a net, about eight feet square, securely fastened on a steel rod frame. This is suspended by a cord running through a pulley at the end of a pole and operated by a windlass. The fisherman lowers the net into the water until it touches the bottom, and after a few minutes' interval winds it up again, bringing with it any denizen of the deep who happens to have sat down on it during its immersion. It is usually a mixed bag, consisting of sprats, shrimps, crabs, jelly-fish, rock whiting, and very often a sizeable plaice or flounder. Anything worth taking is secured by a long landing net, and the apparatus is once more lowered into the water.

There is a great element of chance in this sport. I have watched a man for a whole hour and seen him

catch nothing better than a few prawns, and yet his neighbour, only three or four yards away, landed sea-bass one after the other.

In the evening we sat on the sands and watched the star shells rising over Neuport, and occasionally, when there was a big "strafe" in progress, the whole sky was lit up with the reflection of the gun flashes. Sometimes, in the afternoons, the monitors would entertain us by bombarding the coast. Highly interesting from a spectacular point of view, but judging from the reverberation of the explosions, it must have been very uncomfortable for anyone within half a mile of where those huge shells dropped.

Of course we bathed, and it was very enjoyable when there were not too many jellyfish; but on occasions there were more jellyfish than water, and we spent the rest of the day scratching ourselves. Their arrival in large numbers was always heralded by an extraordinary phosphorescence in the waves, which at night resembled long strings of green electric lights under the water.

The firm sands were admirable for riding, and on one occasion I borrowed a horse from a friendly French officer. This horse was a peculiar animal. He had an air of chronic lassitude and a mouth as tough as teak. The latter was probably due to his taste for gastronomic experiments in the shape of anything he could reach, from barbed wire to beach-stones. I rode him along the sand for about four kilometres and then left him to his own devices whilst I went for a bathe. When I returned he was trying to masticate my towel, and for fear that he might attempt my clothes, I piled them across the saddle. Then I mounted and suggested that he should paddle his feet, but he gave me such a look of reproach that I felt inclined to apologise. After that he turned round and galloped home. Nothing would stop him until we reached the civilized portion of the promenade, and as I had nothing on but a "tin hat," our arrival created a sensation. We had a "succes fou."

About this time the expedition suffered another disaster. Mr. E., one of the members of our party, suddenly developed appendicitis. It was on the night of the first air raid that we experienced and I was preparing to get into bed when the syren commenced to hoot its warning that there was danger about. At first I did not realize what was happening, but presently I heard the other inmates of the house descending to a place of safety, and when my landlady knocked at the door and invited me to share the cellar with them, I decided that it would be wiser to accept. After an hour of sitting in a chilly coal hole, the syren ceased to hoot and I went back to bed, to be awakened about 3.30 a.m. by a terrific bombardment.

This time I slipped a British warm over my pyjamas, and donning my "tin hat," went down to the sands to see what was happening. There were many other people there, but all we could see was the flash of guns from sea and shore and the searchlights on the sea-planes in the sky, whirling about like gigantic fire-flies. There were no bombs dropped that night, and the only danger was from falling shrapnel and shell cases.

Next morning poor E. was very ill, and the S.M.O. of the Alexandra Hospital decided on immediate operation. He was carried away in an ambulance, and his landlady, not understanding the nature of the trouble, was overflowing with sympathy for the poor young man, whom she imagined to have succumbed to the excitement of the previous night. After that, raids became more frequent, but I never saw any damage done. I think brother Boche realised that there was a warm reception waiting for him in that corner of the coast.

The personnel was now reduced to two dental surgeons and two mechanics, but we were daily expecting reinforcements from England. Mr. Parker-Cater, who had originally intended to stay with us only until the expedition was well under way, now received an urgent call home. Naturally he was anxious to see the cars at work before he left, and with that idea we went to see the commandant at the G.H.Q., explained the situation, and asked if it would not be possible to send us with one of the cars to some place where we might work for a few days and so enable Mr. Parker-Cater to make a report. But the commandant seemed to be annoyed at the depletion of the personnel and declared that he would do nothing for us until he saw before him a full complement of dental surgeons and mechanics.

That settled the whole affair, and Mr. Parker-Cater packed up and left Dunkirk next morning. As one may easily imagine, he was very disgusted at having to leave the expedition he had so admirably organized and over which he had spent so much time and trouble, without having been able to treat a single patient. So, like the last of the ten little nigger boys, I was left alone, with instructions to sit tight and await the arrival of our reinforcements.

A few days before this I had received a letter from England, intimating that the commission for which I had applied some months previously had been favourably considered, and I was to return home as soon as possible. E., who was still in hospital, received a similar letter, and it really looked as if the expedition would fizzle out altogether. Then the unexpected happened. I am not at liberty to explain exactly what brought it about, but two days later I received an urgent message directing me to report at the G.H.Q. On going there I was given a new "itineraire," and told to collect a mechanic and start off at once with one of the cars for a certain district.

At the same time the question of our rank was settled, and E. and I., and all who came after us, were graded as "medicins aidesmajeur" with the honorary rank of lieutenants, and the right to sport two gold galons and draw two francs, ninety-eight centimes a day in lieu of rations. Thus, after many weeks of weary waiting, the expedition actually started work.

Appointments.

R.N.M.S.

The following appointments have been made:—

Fleet-Surgeon W. Bett, M.V.O., to be Deputy Surgeon-General.

Temp. Surgeon E. L. Elliott, M.B., to the *Vivid*, for Plymouth Hospital.

R.A.M.C.

To be temp. Captains:—L. Bromley, H. Daw.

To be temp. Lieuts.—E. L. M. Lobb, G. S. Robertson, W. S. George, L. Pern, H. G. Rashleigh, J. F. Douse, J. D. Bridger, F. H. R. Heath, A. Leeming, W. H. Bush, M. R. Dobson, L. H. Burner.

Territorial Force.

Captain to be temp. Major:—W. B. Secretan.

Civil.

Chas. Hicks, M.R.C.S., L.R.C.P., has been appointed Medical Officer of Health and Public Vaccinator to the Godmanchester District of the Huntingdon Union.

F. G. L. Scott. M.R.C.S., L.R.C.P., has been appointed Medical Officer-in-Charge of the First Home of Recovery, "Highfield," Golder's Green, London, N.W. 4.

Pass List.

Royal College of Surgeons of England.

FELLOWSHIP EXAMINATION.

At the Final Examination for Fellowship last month, Alberto Medardo Zamora, M.B. Cantab., acquitted himself satisfactorily, and has been admitted to Fellowship.

FINAL EXAMINATION FOR LICENCE IN DENTAL SURGERY.

At the last Examination the following candidates were successful:—

PART I.

H. J. Powell, M. B. Burton, P. J. S. De Wet, H. Fox, J. C. Johnson, H. L. Jones, R. V. Kingham, F. R. Knowler, H. M. Marshall, E. A. P. Parker. S. E. Tweney.

PART II.

*H. J. Powell. *T. B. Barton, *L. D. Crabb, *G. F. Faustmann, *F. G. P. Flanders, *R. W. Spong, *S. G. Townley.

* Have completed the Examination.

Society of Apothecaries of London.

At the Examination held recently, A. Magill was approved in Midwifery.

Roll of Honour.

Killed in Action.

Sub.-Lieut. John Earle Maxwell, R.N.A.S., reported missing, is now reported killed 25th March.

Wounded.

Capt. A. H. Smith, R.A.M.C., Capt. R. O. H. Jones, R.A.M.C.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Intensive Treatment of Syphilis and Locomotor Ataxia by Aachen Methods. By Reginald Hayes, M.R.C.S. Second edition. Published by Messrs. Baillière, Tindall and Cox, London. Price 3s. 6d. net.

This book is a plea for the treatment of syphilis and parasyphilitic affections by the inunction of mercury combined with sulphur waters taken internally. The author, who has had a large experience of these methods of treatment both at Aachen and in England, is convinced of their value even in parasyphilitic affections. Tabes and general paralysis may often be arrested in their progress, if not cured. Great stress is laid on the absolute necessity for the inunctions to be carried out by a skilled rubber, and not by the patient himself or amateur helpers. The arguments for and against inunction are stated clearly and extremely fairly.

Baillière's Popular Atlas of the Anatomy and Physiology of the Female Human Body. Messrs. Baillière, Tindall and Cox, 8, Henrietta Street, Covent Garden, London, W.C. 2. Price 4s. net.

We have before us the third edition of this popular Atlas with its excellent plates and clear descriptive text. To the student who is starting to study these subjects, this Atlas is essentially a book to be obtained. It does not pretend to replace the standard editions, but to give the student a complete general survey which is so necessary before commencing to study its details. To become an anatomist and physiologist he should first know the broad outlines, without which he cannot understand the minor, but none the less important, facts and details. It is especially recommended to students of midwifery, as it demonstrates very clearly the relations of the pelvic viscera.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

DR. MILWARD'S BEQUEST TO THE MEDICAL SCHOOL.

In March, 1916, Dr. James Milward, at the age of 77, conceived the idea of benefiting the Medical School of Guy's Hospital by making over to the Hospital an estate at Cadoxton-juxta-Barry. This estate was bought in the year 1885 and consisted of about 24 acres of land lying between the towns of Cardiff and Barry and within a short distance of Barry Docks. The estate was built over and the houses let on 999 and 99 year leases. The rents from the estate totalled about £1,035 in 1916.

This estate was, however, subject to a mortgage for £12,250 and the agreement which was reached between Dr. Milward and the Governors of the Hospital was that the Hospital should take over the estate with the mortgage on it and should allow the doctor and his wife an annuity during their lives and the life of the survivor of £300 per annum.

At the moment the Hospital does not obtain any financial benefit from the bequest, as the sum obtained in rents is used up in paying interest on the mortgage, the annuity of £300 a year, and in repaying £250 per annum of the mortgage. The estate will, however, prove, it is hoped, a source of considerable revenue in years to come. A portion of the estate is still undeveloped, and when building operations are again possible after the war, the rents from the estate ought to be substantially increased. Moreover, Barry Docks are becoming increasingly important and there is a good prospect of land in their neighbourhood appreciating considerably in value.

While it seems probable that the Hospital will eventually benefit considerably from Dr. Milward's bequest, Dr. Milward and his wife benefit by having an assured income of £300 a year during their joint lives. The form of the bequest, which benefits both the donor and the Hospital, will, we hope, stimulate other Guy's men to follow Dr. Milward's example, or to make some bequest or memorial in the interests of the Hospital. It can only be regretted that Dr. Milward did not live to see the completion of his scheme, although he only failed to do so by the matter of a few hours. He had made an appointment with the Hospital's solicitors, to attend at their office at 12 noon on June 19th, but died suddenly on the night of June 18th.

THE AIR RAID.

So many graphic descriptions of the air raid have appeared in the press that there is no

need for us to attempt further description. We need only say that the German aeroplanes were seen well as they passed over the hospital. In spite of the fact that bombs fell unpleasantly near the Hospital, there were no signs of panic and the air raid instructions were carried out without confusion. Luckily the Hospital was not called on to treat many cases. In fact, considering the large number of aeroplanes and bombs, the loss of life was extremely slight. We fear, however, that the success of the German aircraft in escaping destruction will stimulate them to further efforts with even larger fleets of machines. It may be feared that the agitation for reprisals and more aeroplanes for home defence, which is being carried out by certain sections of the press, will lead to a weak government denuding the fighting front in France of its necessary aircraft. If this be done we should only stimulate the enemy to greater efforts.

It seems that some members of medical and surgical firms were in doubt as to what they ought to do in case of an air raid. We imagine that it is intended that they should go to their wards, especially the female wards.

THE DENTAL PROFESSION AND THE WAR.

We publish in this issue a letter from a correspondent who sets out with great ability the grievances of the Dental Profession. We fear that his criticisms on the conduct of the War Office are justified by the facts. The insatiable greed of our high military authorities for cannon fodder has led in too many cases to the loss of lives which would have been more valuably employed in other ways. Dental treatment for our soldiers is hopelessly inadequate compared with that existing in the armies of our allies and enemies. It is common knowledge to anyone who has been connected with the army that large numbers of men are lost temporarily or even permanently from dyspepsia and other causes due to bad teeth. If the teeth of all recruits were put in good order by a staff of military dentists, and if dental treatment were more easily available close behind the front a good deal of unnecessary suffering and wastage would be avoided. We can only hope that the War Office will eventually discover that a skilled dentist, who has spent years on his education, can be more usefully employed in carrying on his work among soldiers, than as a private in an infantry regiment.

CRITICISMS OF THE R.A.M.C.

A correspondent takes us to task on some of the criticisms we have from time to time directed against the R.A.M.C. "I think," he writes, "that the GAZETTE takes rather a pessimistic view of the R.A.M.C., which, although far from perfect, is a great deal better than many other corps and does its work rather well, even if it is extravagant in cost and personnel."

Doubtless it is much easier to criticise than to suggeest remedies, and we hope anything we may have written will not be taken as minimising the splendid and heroic work done by individual members of the R.A.M.C. On the other hand, we cannot help feeling that the men, or perhaps we ought to say the man, who controls the policy of the Army Medical service would do better if he occasionally consulted some of the authorities in the Profession. Such a consultation would have avoided the ignominious "climb down" of the R.A.M.C. authorities a few months ago, when they suddenly tried to call up all qualified men of military age without consulting the Committee of of Reference or the Medical War Committee.

"THE "OLD VIC." APPEAL FUND.

The "Old Vic." is doing great work in South London in enabling many thousands of the poor to see classical plays and operas at an almost nominal cost. It is only necessary to visit the "Old Vic." on a Saturday night to be fully convinced that a suspension of its performances would be a great disaster. Over 90,000 chil-

dren in one season have been present at school matinees, these performances counting, by permission of the Educational Authorities, as school attendances. It is the one "People's Play and Opera House" presenting continually at cheap prices the finest music and the finest plays.

Unfortunately certain structural alterations are now required by the London County Council, and a sum of about £7,000 must be raised if the "Old Vic." is to be enabled to continue its good work.

An appeal committee has been formed with Mr. J. Forbes-Robertson as chairman. We feel that there may be many old Guy's men who would be willing to contribute something to the Appeal Fund. Donations of any amount should be addressed to the Hon. Treasurer, Appeal Fund, "Old Vic." Waterloo Road, S.E. 1.

At a General Court of Governors held on Friday, July 6th, Mr. J. E. Humphery was elected a Governor of the Corporation. Mr. Humphery is connected with Hay's Wharf.

We regret to hear of the death of Sir Herbert Tree, who has been a Governor of the Hospital for many years. He gave valuable assistance in raising funds for the Hospital.

Obituary.

FRANCIS HENRY KNAGGS,

M.R.C.S. Eng.,

Ophthalmic and Aural Surgeon, Huddersfield Royal Infirmary and Huddersfield War Hospital.

Mr. F. H. Knaggs, who died on June 24th from pneumonia after a brief illness at the age of 56 years, was the third son of the late Dr. Samuel Knaggs, who practised for many years in Huddersfield. He was educated at the Huddersfield College and at Rossall, taking his medical course at Guy's Hospital, where he held appointments in the Eye and Ear Departments, being later Clinical Assistant at the (Moorfields) Royal London Ophthalmic Hospital.

After a term of two years as House Surgeon at the Gloucester General Infirmary and Eye Institution he commenced general practice in 1889 with his father and steadily gained in reputation as a specialist in eye and ear affections. For several years he assisted his brother, Mr. R. Lawford Knaggs, in the Ophthalmic and Aural Department of the Leeds Public Dispensary, and in 1905 became Honorary Surgeon to the recently created Ophthalmic and Aural Department at the Huddersfield Royal Infirmary, to which his father was for many years Senior Honorary Surgeon. His death thus breaks a connection with that institution which had existed since its first establishment. From the date of its opening in October, 1915, Mr. Knaggs had been a Civilian Medical Officer at the Huddersfield War Hospital, and in January last received a commission as Temporary Captain in the Royal Army Medical Corps. He leaves a widow and one daughter and a wide circle of friends to mourn their loss. Mr. Knaggs was formerly honorary secretary of the Huddersfield Medical Society, where he read a number of practical papers on ophthalmic subjects, some of which were published in our columns.

Sub.-Lieut. JOHN EARLE MAXWELL,

R.N.A.S., F.R.A.S.

Lieut. Maxwell was the elder son of Mr. John A. Maxwell, solicitor, of 52, Bishopsgate, and was born on June 24th, 1892. He was educated at Haileybury, and left in 1911. After studying law for two years he came to Guy's as a first year student in January, 1913. In January, 1916, he was given a commission in the R.N.V.R. and was attached to the R.N.A.S.

After serving at various air stations in England, he was ordered to the Eastern Mediterranean in November, 1916. On March 30th of the present year he went up for a long-distance reconnaissance over enemy territory, but failed to return. He was accordingly reported missing as from this date, though the authorities held out considerable hopes of his safety owing to the failure of the enemy to report su h an un-

usual occurrence as the bringing down of a British aeroplane. But unhappily, after ten weeks of uncertainty, definite reports were received to the effect that the machine had been shot down on March 30th, and that both Lieut. Maxwell and the pilot had been killed.

News of Lieut. Maxwell's death was received with very general regret at Guy's, as he was a contemporary of the majority of men now in the wards. He was for some time secretary of the Physiological Society and took a very active part in the discussions at the meetings. He was always thoroughly at home in any debate or argument and was a very clear reasoner. His arguments were well thought out, and he seldom made a slip on a point of pure logic. He was an able and enthusiastic amateur astronomer, and more than once lectured on his subject at the Hampstead Scientific Society, besides reading papers at the British Astronomical Association. He was one of the youngest Fellows of the Royal Astronomical Society, having been elected at the age of 22. He did a good deal of practical work with the telescope, and his talents as an observer stood him in good stead in his subsequent aerial work, especially in reconnaissance and bomb-dropping. In the latter he particularly distinguished himself, and some time before his death, he was made armament and intelligence officer of his squadron. He had just those qualities which make for success in an airman—absolute fearlessness and great keenness on his work. We offer our most sincere sympathy to his parents in their bereavement.

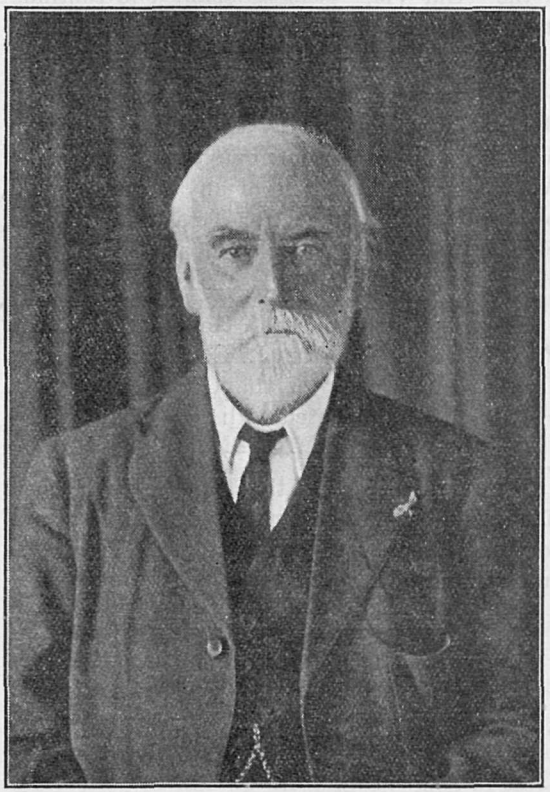
A photograph of Lieut. Maxwell will appear in a later issue of the Gazette.

JOHN MILWARD,

M.D., M.R.C.S., L.S.A.

Dr. James Milward entered Guy's in 1861, where he had a distinguished career as a student and house-officer. In 1863 he won the prize open to second year students, and later was awarded the Treasurer's Gold Medal for Clinical Surgery. In 1865 he qualified as M.R.C.S. Eng., and a year later passed the L.S.A. After qualification he acted as assistant in the Ophthalmic Department and as Resident Obstetric Assistant. During his career at Guy's he won the esteem and affection of fellow-students and Staff.

For many years Dr. Milward practised in Cardiff and held various public appointments. His professional skill and enthusiasm, combined with his kind and sympathetic character, made him universally beloved. Throughout his



life he continued to take a great interest in Guy's, which showed itself in a benefaction to the Hospital, an account of which will be found in "Passim" of this issue. He died suddenly on June 18th last at the age of 78.

Periodicals received.

Revista Odontologica (Buenos Aires), The Hospital, The Nursing Times, New York State Journal of Medicine, The Prescriber, The Hospital Gazette, St. Mary's Hospital Gazette.

Dysentery.

CLINICAL LECTURE BY DR. A. F. HURST.

II.—BACILLARY DYSENTERY.

From what is now known about its geographical distribution, it is highly probable that the dysentery, which has always been common in armies during war time, was bacillary and not amœbic. Out of the 30,000 English soldiers who fought in the Crimea 7,883 suffered from dysentery, and of these 2,143 died; in the South African War there were 38,108 cases with 1,342 deaths.

Bacillary dysentery made its first appearance in the early weeks of the war in East Prussia and Galicia and among von Kluck's "ill-fed and tired" soldiers on their march towards Paris. Since then it has occurred on every front whenever the weather has been hot, but there has been no serious epidemic in France or Flanders. It was the common form of dysentery in the British Mediterranean Forces until June, 1915; during July, August, and September a large majority of the cases were amœbic, but with the colder weather after October bacillary dysentery became once more the prevailing type, though its frequency gradually diminished, until at the end of the year there was very little dysentery of either kind. Bacillary dysentery was common, but amœbic dysentery comparatively rare, in the summer of 1916 among British and French Troops at Salonica and in the army in Mesopotamia.

The bacillary dysentery in the Mediterranean Forces and on the Eastern Front was chiefly caused by Shiga's bacillus and that on the Western front by Flexner's and the Y-bacillus, although in the summer of 1916 isolated outbreaks of Shiga infection were recorded, probably as a result of infection brought by troops who had previously fought at Gallipoli. In some cases bacilli have been found which differ from all previously isolated varieties.

The disease is spread in exactly the same way as amœbic dysentery, and the *Bacillus dysenteriæ* has been found in the excreta of flies up to three days after they had fed on infected stools. The stools of convalescent patients may still contain the bacillus for as long as a year after infection. So-called "contact carriers" have generally had mild diarrhœa, the nature of which has not been recognised, as there is no doubt that the *Bacillus dysenteriæ* can cause slight catarrhal colitis, in which loose stools containing no blood and little or no mucus are passed.

Morbid Anatomy.—In acute bacillary dysentery all or nearly all of the colon and the last one to three feet of the ileum are involved. In chronic cases the changes are generally confined to the lower half of the colon.

The disease begins as an acute inflammation of the whole mucous membrane with areas of coagulation necrosis, which later give rise to superficial ulcers, the submucous tissue and the muscular and peritoneal coats escaping more or less completely. In a typical specimen dark greenish grey necrotic areas and irregular superficial ulcers are scattered over the inflamed and thickened mucous membrane. When the disease becomes chronic, the necrotic areas are completely replaced by ulcers, which may be so extensive that only scattered islets of thickened mucous membrane remain.

Symptoms.—The incubation period is between one and seven days. The disease generally begins acutely with griping abdominal pain; this is soon followed by the passage of fluid stools containing mucus, which may be blood-stained from the onset. In the early stages between six and thirty stools, many of which consist entirely of mucus mixed with pus and blood, are passed in the twenty-four hours. When the rectum is involved tenesmus occurs, in addition to the abdominal pain which generally precedes defæcation; it may be so persistent that the patient has a constant desire to open his bowels and is unwilling to leave the bed-pan. In severe cases there is often incontinence of fæces. The anus may become inflamed, excoriated, and painful. Drinking, eating, and every movement intensify the desire to defæcate. Micturition may also be frequent and painful. The intestines are very rarely thickened, and there is not much ten-

derness, but the iliac colon is often palpable as a firm, rather tender contracted cord. Vomiting is very rare, except in fulminating cases, in which collapse may occur and death ensue from suprarenal insufficiency, the suprarenal glands showing congestion and necrosis at the autopsy.

The patient rapidly becomes exhausted. Moderate fever is generally present, and the temperature may rise as high as 105°. The pulse is rapid and weak.

In slight cases the acute symptoms do not last more than two or three days; in severer cases improvement only begins after a week or fortnight, and convalescence is slow owing to the great weakness which results from the diarrhœa and toxæmia. The disease sometimes become chronic; diarrhœa persists with the passage of blood and mucus or of abundant thick mucus with little or no blood, and emaciation, weakness and anæmia become progressively greater. In most cases the patient ultimately recovers, but death may result from exhaustion.

Arthritis involving one or more of the large joints may occur. It is common in some epidemics, such as that which attacked the British troops in the South African war, but in the present war it has been comparatively rare. The symptoms generally do not develop until the diarrhœa has ceased for an interval varying between a few days and three weeks. Their severity does not vary with that of the original attack, and arthritis is not uncommon after an attack which was so slight that its nature was not recognised at the time, and the patient may not even have gone into hospital for it. The possibility of a dysenteric origin should therefore be considered in every case of arthritis when bacillary dysentery is prevalent. The knee is most often affected. There is a large effusion, but less pain, tenderness and redness than in acute rheumatism, the disease bearing more resemblance to gonococcal arthritis. A considerable amount of muscular atrophy often develops. Complete recovery without suppuration always takes place, but sometimes not until several months have elapsed. Fever is common, but the heart is never affected. The effusion into the joint it sterile, but contains numerous polymorphonuclear cells.

I have also seen two cases in which an attack of dysentery brought on acute gout in men who were already subject to the disease. It is necessary to distinguish dysenteric arthritis from the arthritis which may follow the injection of antidysenteric serum. This is often accompanied by other symptoms of serum disease, such as urticaria and headache, and generally begins about seven or eight days after injection.

An individual, who has previously been subject to hæmorrhoids, is very liable to be troubled with bleeding and prolapse after an attack of dysentery; the possibility of this source of hæmorrhage, when the stools have become solid, should be borne in mind.

Diagnosis.—The only conclusive evidence of the presence of bacillary dysentery is the discovery in the fæces of the bacillus with its characteristic cultural properties and its agglutination with specific immune sera. A piece of mucus free from fæces should be picked out of the stool and sent at once for examination, as the organism can be much more easily isolated from such a specimen than from the actual fæces. A definite result cannot be obtained in less than three days, but a presumptive diagnosis can often be made in thirty-six hours.

The macroscopic and still more the microscopic appearance of the stools of bacillary dysentery are so characteristic that a probable diagnosis can be made without waiting for the bacteriological report. Glairy white or yellowish mucus streaked with bright red blood is passed alone or with a little fæcal matter between patches of mucus. Under the microscope red corpuscles are seen scattered over a ground of pus cells mixed with a few larger round mononuclear cells and a still smaller number of very large cells, which have occasionally been mistaken by inexperienced observers for amœbæ. All these cells are phagocytic. The characteristic stools of the acute attack are followed by the passage of brown liquid fæces, which contain similar cells to those found in

the mucus. When the stools become formed, the fæces are at first coated with mucus, which contains numerous elongated cells derived from the columnar epithelium of the mucous membrane, a few of which are sometimes present during the acute stage.

Amœbic stools are generally less copious and watery than in bacillary dysentery. The blood and mucus are generally darker, the blood being often brown or even black, and the mucus transparent and dark brown. The mucus is more often mixed with fæces, and in some cases the stools consist simply of unformed fæces impregnated with mucus. Apart from the amœbæ there is nothing characteristic about the microscopical appearance of the stools, the cells being smaller in number and more variable in character than those found in bacillary dysentery.

The blood of patients suffering from dysentery never agglutinates the bacillus before the seventh and sometimes not until the twentieth day, after which the reaction lasts for three months or more. It thus develops too late to be of much practical value, for specific treatment should be instituted at once in order to be successful. With Shiga's bacillus agglutination should be obtained in a dilution of 1 in 50, and with Flexner's with 1 in 200 or even 300 before infection can be regarded as certain; although a positive result is then of great value, a negative result is of comparative little importance. Each strain of bacillus used for agglutination tests should be tested against normal individuals before being employed; thus the Flexner bacillus commonly used during 1916 in French laboratories was agglutinated by normal sera and still more often by sera of typhoid and paratyphoid patients up to a dilution of 1 in 300.

Bacillary dysentery differs from amœbic dysentery in the more acute onset, higher fever and severer toxæmic symptoms; tenesmus is more frequent and thickening of the colon is much less common; tenderness is less marked and when present is generally greater on the left side than on the right. Hepatitis and hepatic abscess never occur, and local and general peritonitis are very rare. There is no leucocytosis, a greater number of leucocytes than 15,000 per c.mm. pointing strongly to amœbic dysentery.

In the epidemic in the Mediterranean Forces in 1915 the clinical picture was much confused by the frequent association of amœbic with bacillary dysentery. The possibility of such an association should be considered, whenever a case of apparently amœbic or bacillary dysentery does not respond to treatment with emetine or anti-dysenteric serum respectively. In other cases dysentery was associated with paratyphoid fever or infective jaundice.

In rare cases the onset is so acute and the stools are so watery and profuse that the disease may be mistaken for cholera, until large quantities of mucus with or without blood are also passed and the diagnosis becomes clear.

Prognosis.—Some epidemics appear to be due to a much more virulent strain of the bacillus than others, the mortality being occasionally as high as 40 per cent. Shiga's bacillus generally gives rise to a more severe and protracted form of dysentery than Flexner's bacillus. With the treatment described below the mortality is now often no more than 2 per cent.

Prophylaxis.—Vaccination against dysentery has not been much employed owing to the very severe local reaction, which follows the injection of killed cultures of the organism. The reaction is, however, said to be less severe if the bacilli are sensitised with an immune serum or treated with eusol, and it is probable that in the future a considerable degree of protection will be obtained by the use of polyvalent vaccines, made whenever possible from strains isolated in the locality in which the vaccine is to be used. Apart from this, the general sanitary measures, as described for the prophylaxis of amœbic dysentery, are the only means of preventing the spread of the disease among armies in war time.

In extensive epidemics it is impossible to deal with the carrier problem, but in small epidemics convalescent carriers should be kept under supervision until three negative examinations of the stools have been made at inter-

vals of a week following the last positive result. An examination of the stools for occult blood—traces which can be recognised by chemical means though they do not colour the fæces—is also useful, as it shows whether any actual ulceration is still present. The necessity for some such test, which would help to prevent a man being sent to duty before he had really recovered, was well shown in a convalescent patient who was passing normally formed stools; as a little blood was still occasionally present, I examined him with the sigmoidoscope and found numerous small superficial and readily bleeding ulcers, the intervening mucous membrane being abnormally thick and red. Some mucus removed directly from an ulcer contained Shiga's bacillus.

Treatment.—The specific treatment of bacillary dysentery with anti-dysenteric serum instead of emetine, the saline treatment, and the local treatment with enemata require special description, but otherwise the treatment is the same as for amœbic dysentery.

As the intestinal lesions are due not to the local action of the bacilli but to the action of their toxins, which are absorbed from the colon and cause necrosis of the mucous membrane on re-excretion, and as the general symptoms, including such complications as arthritis, are also due to the absorption of toxins, the rational treatment is to get rid of the toxins from the the bowel as rapidly and completely as possible, and to neutralise the toxins which are absorbed by means of specific antitoxins. The former indication is met by treatment with saline aperients, and the latter by the use of anti-dysenteric serum.

Saline Treatment. — Saline aperients have been used for dysentery since the seventeenth century; they were successfully employed in the American Civil War and in the South African War, but were found of no value by many Anglo-Indian physicians. This difference of opinion is now known to be due to the fact that the treatment is only of value in bacillary dysentery, which is less common than amœbic dysentery in most parts of India.

Half an ounce of sodium sulphate in saturated solution should be given at the onset. This is followed by drachm doses every four hours during the first day and then every six hours until the dysenteric character of the stools disappears. If the patient is not seen on the first day the large initial dose should be omitted, and if the excessive action of the bowels has already resulted in exhaustion, no saline aperient should be given at all. This treatment not only exerts a favourable influence on the character of the stools, but it also relieves tenesmus. In mild cases the saline treatment often results in rapid recovery, but there is considerable risk that the patient will remain a carrier, who is likely to have a relapse with any accidental irritation of his bowels and is at the same time a source of infection for other members of his unit. For this reason the serum should be given in mild as well as severe cases if a sufficient quantity is available.

Serum Treatment.—As the serum of horses immunised against one variety of dysentery bacillus is only useful in the treatment of dysentery due to infection with this variety, a polyvalent serum prepared by injecting horses with all available strains of the dysentery bacillus should be used; a serum of this kind is made by the Lister Institute. Its valency has recently been increased by the addition of a number of strains given me in Salonica by Captain Elworthy, and its value would be still further increased if bacteriologists would send home strains isolated in different parts of the world. In severe cases the serum should be given as soon as the patient is seen, if the dysentery is probably bacillary in origin; in mild cases the injection may be postponed until bacteriological confirmation is obtained.

The serum should be injected intravenously, as the antitoxin is then immediately available to neutralise the toxin, whereas if subcutaneous injection is employed, a delay of some days occurs before the whole of the serum is absorbed; serum given by intra-muscular injection is absorbed rather more rapidly than when given subcutaneously.

In asthmatics and in patients who have on any previous occasion received dysentery, diphtheria or tetanus antitoxin or other serum the danger of anaphylaxis can be overcome by a preliminary subcutaneous injection of 1/10 c.c. of the serum half an hour before the first large injection, and by giving the latter into a muscle instead of into a vein. The danger of anaphylaxis is not merely theoretical; in July, 1916, a man died on a hospital ship a few minutes after 20 c.c. of antidysenteric serum had been injected intravenously; he had had three previous injections without ill-effect, the last having been at Salonica 24 days earlier. He felt "funny" and became pale during the injection; his whole body then became deeply flushed; in a few minutes the flushing was replaced by extreme cyanosis, his pulse became weaker, and he died in about a quarter of an hour.

In mild cases 40 c.c. of serum are sufficient, but in very severe cases as much as 100 c.c. should be injected at one time: 60 c.c. given on the first day, followed by 20 c.c. on the two following days, is an appropriate dose for cases of moderate severity. If necessary, however, the dose may be repeated daily for ten or more days. When hæmorrhage is severe, the serum has the additional advantage of increasing the coagulability of the blood; no doubt it is this property which explains the good effects occasionally observed when the serum has been given in amœbic dysentery, but in such cases ordinary horse serum would be equally efficacious.

Local Treatment.—Astringent and antiseptic drugs given by the mouth are of little or no use, as they become too greatly diluted by the time they reach the colon, if given in doses sufficiently small to pass through the stomach and intestines without damaging them, and when they reach the affected part of the colon they are washed along at too great a speed to have any effect. The only method of treating the bowel locally is by enemata, which are extremely valuable in the chronic colitis and chronic diarrhœa, which frequently follow acute amœbic and bacillary dysentery, especially if specific treatment has not been given sufficiently early and energetically. I have found tannic acid (gr. iv to the ounce) the most useful of the numerous drugs which have been recommended, with the exception of silver-gelatose [albargin] (gr. i to the ounce), which is, however, at present unobtainable. Injections should not be used in acute cases: quite apart from the difficulty in administering them caused by the great irritability of the rectum, which makes it impossible to retain fluid sufficiently long to be of any value, there is actual danger in severe cases; I know of one case in which the injection caused sudden violent abdominal pain owing to perforation of an ulcer, and death from general peritonitis followed three days later. One and a half pints of the fluid at 100°F. should be slowly run into the rectum from a funnel or douche-can, held not more than one and a half feet above the patient, the tube being introduced only just beyond the anal sphincter. The patient may lie on his left side, but the cæcum is reached most rapidly if he afterwards assumes the knee-elbow position for a few minutes. The injection should be given soon after the bowels have been opened, and the fluid should be retained for as nearly half an hour as possible, though it cannot as a rule be retained for more than a few minutes at first. The treatment should be repeated daily or on alternate days between three and five times; the series can, if necessary, be repeated after a week's interval.

Colitis and Irritability of the Colon following Dysentery.

Patients who have recovered from an acute attack of dysentery frequently remain unfit for a considerable period, which may even extend to years. The symptoms are due to the chronic colitis which may follow either amœbic or bacillary dysentery after the specific infection has died out, but the possibility that amœbic cysts or even dysentery bacilli may still be present can only be excluded by frequent expert examinations of the stools. In most cases the patient suffers from alternating attacks of constipation and diarrhœa, the latter often being brought on by aperients taken for the relief

of the former. In other cases the diarrhœa follows an indiscretion in diet or exposure to cold. During the periods of constipation, hard scybala coated with mucus are passed. The diarrhœa is accompanied by colic, which is often severe; stinking fluid fæces are passed, often with mucus and occasionally with a little bright red blood, which is generally intimately mixed with the fæces. The diarrhœa may only last for a few hours; it rarely persists for more than two or three days, and the attacks may be separated by intervals of several weeks or months. The patient has little appetite and cannot regain his former weight. He complains of constant abdominal discomfort. Slight tenderness is often present, especially over the iliac colon, which can generally be felt as a firmly contracted cord, which contains scybala when constipation is present. The liver is tender and may be slightly enlarged in many of the cases in which the original infection was amœbic. The tongue is dirty and the patient complains of discomfort and fulness immediately after meals. There is no fever, but the pulse is often rapid. The patient gets quickly tired and may complain of back-ache. All the symptoms are aggravated by over-work. In one case the attacks of diarrhœa were immediately preceded by fainting; in another an attack of asthma, from which the patient had suffered for many years, was always a warning that diarrhœa would follow. In both cases the absorption of toxins from the fluid fæces led to symptoms before sufficient fæces had reached the rectum to produce the desire to defæcate.

Sometimes the attacks of diarrhœa cease to occur, but intractable constipation remains and the general symptoms persist, though in a lessened degree. In spite of the widespread ulceration in both forms of dysentery, and in spite of its great depth in amœbic cases, I have neither seen nor heard of any case in which the constipation was due to the development of a stricture.

Prevention and Treatment.—Except in mild cases of very short duration, it is advisable for the patient to live for some months after his recovery in a country with a warm and equable climate, where the disease is not endemic, and he should wear a cholera belt. He should take no green vegetables, except as purées, no salads nor pickles, and no fruit skins nor pips, whether raw, cooked or in jam, for at least two months after the symptoms have disappeared. As alcoholism predisposes to hepatic complications in amœbic dysentery, no alcohol should be allowed for at least six months, and then only a small quantity at lunch and dinner. Smoking is only permissible in strict moderation. The patient should eat very slowly, and attention should be paid to the teeth in order to prevent secondary infection of the bowel. There is no evidence, however, that the amœba found in many cases of pyorrhœa alveolaris has any connection with dysentery, though morphologically it resembles the *Entamœba histolytica*.

The bowels should be kept regular by sodium sulphate taken every morning or by paraffin taken twice a day, the dose being just sufficient to produce a single stool or at the most two stools. Vegetable aperients must be avoided. The stools should be examined for amœbic cysts and for dysentery or paratyphoid bacilli. If cysts are found, or if the liver is tender even in the absence of amœbic cysts, a grain of emetine hydrochloride should be injected subcutaneously every morning and a grain of emetine bismuth iodide should be taken by mouth every evening for ten days, or for longer if hepatic tenderness persists. In the rare cases in which dysenteric bacilli are found, 20 c.c. of antidysenteric serum should be given daily for a week, precaution being taken to avoid anaphylaxis if injections were given during the acute stage. A persistent infection with *Bacillus dysenteriæ* or *Bacillus paratyphosus* should be treated by autogenous vaccines.

Roll of Honour.

Died.

Capt. F. H. Knaggs, R.A.M.C.

Deaths amongst the Sons of Guy's Men.

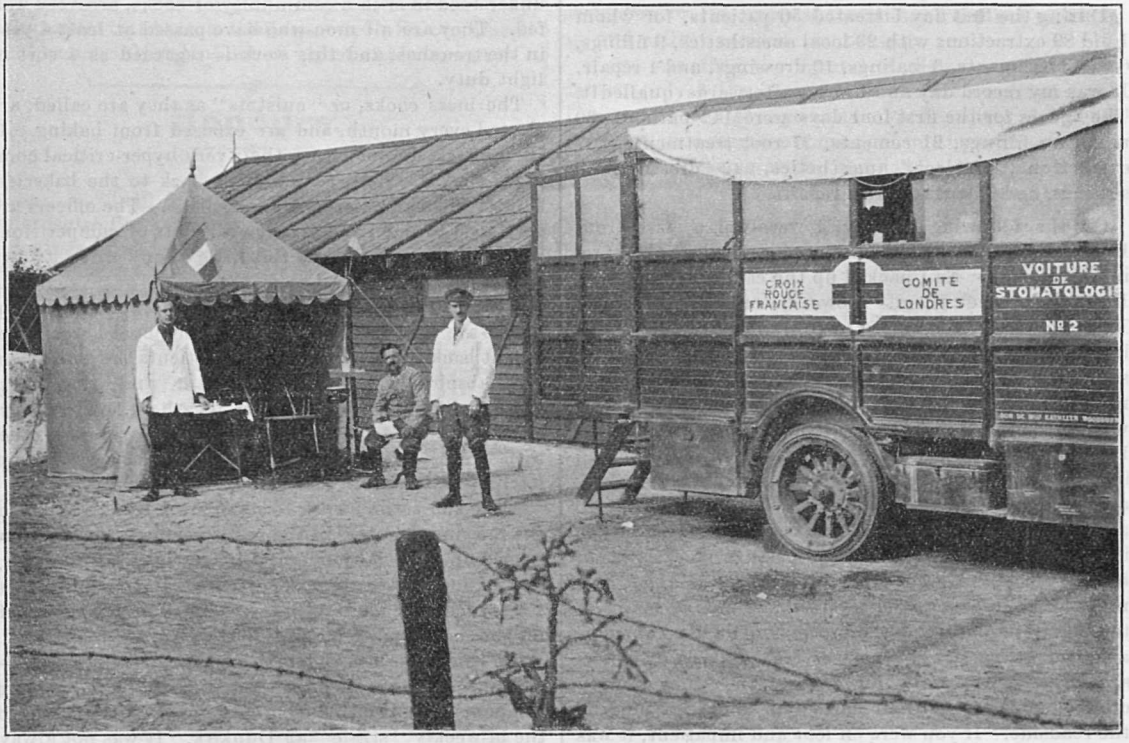
Capt. F. L. Davy, Australian Imperial Forces, killed in action. The only son of Lieut.-Col. H. Davy, C.B., R.A.M.C.

With the French Red Cross Dental Ambulances.

BY AN OLD GUY'S MAN.

PART V.

WE left Dunkirk early next morning in a heavy rain storm, en route for B, a small town about twenty kilometres away, which we covered in a little less than an hour. On arrival we reported to the chief of the Military Hospital, who seemed delighted at the arrival of the car and promised us plenty of work. He directed us some two kilometres farther on, to a "centre de fabrication." This place turned out to be a large bakery employing about 900 men, 700 of whom were professed cooks, and where they baked innumerable loaves for the army.



Our first view of the place was not very inviting. It consisted of a number of long sheds formed in the usual hollow square, enclosing the inevitable garden, and placed between a canal and a railway siding It looked very dismal in the drenching rain. When we arrived we found that the two officers in charge had gone into town. They turned up an hour later and proved to be two of the jolliest fellows it has ever been my good luck to meet. They welcomed us heartily and turned my mechanic over to the care of a sergeant, and invited me to share their "popoli," which is the equivalent to our mess.

After lunch they presented me to the medical officer who promised to beat up a respectable show of patients for the following morning. Then we went to prepare the car, but hardly had we opened up the back when the men commenced to arrive in two's and threes. I fancy that their own Dental Surgeons are a bit diffident about the administration of local anæsthetics, for the men were at first a little shy, and although they were all suffering from dental caries, they explained that they had only come to look on. Eventually I persuaded one of them to take the chair, and the result seemed so satisfactory that during the afternoon I treated fourteen patients. Then the two officers arrived and escorted me into town to the "maire," to enquire for a billet. My mechanic elected to stay in the car and made himself very comfortable on a camp bed. I was lodged in the house of one Buno, a veterinary surgeon, whose family were charming people and made me very comfortable. On the night of my arrival they decked my room with roses, and the following morning when I went in search of my boots, which were missing, I found them in the tender care of Mademoiselle Buno, who was industriously removing the accumulated dirt and grease of weeks. I have never discovered what magical preparation she used, but she managed to transform them into a pair of

"godillots" fit for a field-marshal. I have still those boots and they still retain their maroccan complexion.

That morning I departed early to the scene of my labours, and on arriving at the car I found a group of about forty men waiting for me. The officers had provided an intelligent "caporal" to act as orderly, and he gravely handed me a list of some 300 names of men needing attention. Under my direction he marshalled those present into two groups, those requiring extractions and those requiring conservative treatment. As is usual in baking communities, they were all suffering badly from caries and they kept me very busy. The "caporal" provided each man with a mouth chart with the name on it, and sent them up in their proper order. I worked hard from 8 o'clock fn the morning until midday, and from 2 o'clock in the afternoon until 5 o'clock.

During the first day I treated 50 patients, for whom I did 89 extractions with 23 local anæsthetics, 9 fillings, 6 root treatments, 3 scalings, 10 dressings, and 1 repair. It was my record day and I never afterwards equalled it. The figures for the first four days were 142 patients, 30 amalgam fillings, 21 cements, 27 root treatments, 207 extractions, 78 local anæsthetics, 42 dressings, 6 scalings, and 6 dentures and repairs.

On the following Sunday I received a wire from England announcing the imminent arrival of the "reinforcements." So I packed up the car and returned to Dunkirk to meet them. However, only one of them, M. S., arrived. We waited in Dunkirk until the following evening, but as there was no sign of the others we set off again for B. This time we took the road leisurely, my previous experience of the district taught me that it was quite useless to hurry. Nobody ever hurries in B. It is a curious old town, very reminiscent of Bruges in in its dullness and intersecting canals. These canals are crossed by quaint draw-bridgos of medieval pattern, and we invariably arrived at one of these bridges just as it had been hoisted to allow the passage of a string of barges. Their average rate of progress is about two miles an hour, and as their were sometimes as many as ten barges in one string the procession took a considerable time to pass. The natives regard these delays as a providential excuse for a rest, and they simply climbed down from their carts and smoked a pipe by the roadside. If you were on foot and impatient, it was very simple to step off the quay on to the barges, stroll across the deck and on to the opposite bank. I have on more than one occasion seen the bargee on the leading unit step ashore, nip into a neighbouring estaminet for some refreshment and be out again in time to board the tail of the procession.

Our return to the "centre of fabrication" was greeted with enthusiasm and we were soon hard at work again. This time we pitched the tent and filled it with the new portable chair, etc. S. performed the extractions in the tent (nicknamed "la salle des bourreaux") and I did the fillings in the car. Together we managed to treat more than 200 patients in six days. In the evening when our work was done we very often went out shooting.

In France the shooting has been closed since the commencement of the war, and in consequence the country is overrun with game. It was a poor evening that did not yield at least a hare or a brace of birds.

Of course we visited the bakery, and found it very interesting. The ovens are built of clay, and are heated entirely by wood which is brought from some distance by canal. They bake many thousands of loaves day and night, and no bread is distributed until it has matured for 48 hours. It is a wonderful sight in the maturing sheds. There I have seen as many as 30,000 large flat loaves, each representing two rations, ranged on wooden racks ticketed with the date of baking. In spite of the arduous work the men are very happy and, as is easily understood in such a community of cooks, are very well fed. They are all men who have passed at least a year in the trenches, and this work is regarded as a sort of light duty.

The mess cooks, or "cuistots" as they are called, are elected every month, and are excused from baking. If their efforts do not please their very hyper-critical comrades they are deposed and sent back to the bakeries. This is why the cooking is so excellent. The officers are very good to them and arrange all sorts of competitions for their amusement, and this little colony grows its own vegetables, poultry and dairy produce.

Military "crime" among them is rare, for the punishments are very severe, and a man convicted three times is sent back to the trenches. As patients they are splendid, absolutely indifferent to pain, and exceedingly grateful for anything you do for them. They were always anxious to help and literally fell over each other to perform any little "fatigues" such as cleaning up, fetching water, etc.

After the second week I returned to Dunkirk to meet the missing members of the re-inforcement who had now turned up. The second car was brought out and they started for a rest camp over the Belgian frontier, whilst I returned once more to B—— to finish up before we left for the second place on our "itineraire."

On the whole we had a very peaceful time at B—— without any air raids or other disturbances, but we were frequently awakened during the night by the sound of the bi-weekly "strafe" at Dunkirk. It was not always so calm at other places on our beat, and in one spot we received a reminder that the war was still proceeding in the shape of ten shells thrown into the village in a week.

One more word about the cars. They filled an unique position in the dental treatment of the troops, and it was for this work that they were designed and equipped. In every large army there is always a great number of men suffering from acute dental trouble in one form or another. They cannot be spared from their posts for sufficient time to visit a base hospital, or any other place where they can receive treatment, except at the hands of their M.O.'s who are not provided with the necessary instruments. So they have to endure their pain, and,

very often, being unable to masticate, fall sick and have to be sent away to the bases. Then again, in an army drawn from all classes there are many men wearing artificial dentures. If they happen to break them, they are quite as helpless as a myopic patient who has lost his glasses.

It is in the treatment of these casualties that mobile dental surgeries, operating at the rest camps or as near the fighting line as is permissible, are invaluable. The French have recognized these facts and have equipped and sent out quite a small fleet of dental cars. I believe the Germans have something of the sort in operation, and during the months that I had the misfortune to be detained in the German lines I noticed that any man sent back for a rest, or wounded, was not allowed to return to the trenches until his mouth had been put in thorough order. Some day the English authorities may awake to the fact that a similar service with our troops would be not only useful but an economical necessity.

Honours.

Wounded.

Lieut. V. T. C. Bent, R.A.M.C., attached to North Staffordshire Regiment.

CORRECTION.—We regret the error in our last issue in which Major Chas. M. Murray, S.A.M.C. (mentioned in despatches), was reported as having been awarded the D.S.O.

R.N.M.S.

Fleet-Surg. P. M. May to the *Pembroke*, additional for East London Recruiting District.

A.M.S.

Lieut.-Col. and Bt. Col. E. M. Pilcher, D.S.O., to be temp. Colonel.

S.A.M.C.

To be temp. Major—Lieut.-Col. H. A. Moffatt, D.S.O.

R.A.M.C.

To be temp. Capts.—A. Buchanan, T. G. Evans, T. L. Jones, T. F. Wilson.

To be temp. Lieuts.—T. C. Pocock, H. V. Mitchell, O. V. Payne, J. A. Wood, A. W. Ewing, F. H. Fuller, C. B. Ticehurst, P. D. Hunter, R. J. Bentley.

Officers seconded for duty with a General Hospital—Majors F. J. Steward, J. A. Andrews, Capts. F. D. S. Jackson, W. Tyson, W. B. Secretan, R. Michell, R. H. Fagge.

Officers relinquishing their Commissions—Temp. Lieut.-Col. A. H. Carter (on account of ill-health), Temp. Capt. E. E. Frazer, Capt. C. Coventry, Capt. C. T. Hilton, Lieut. W. M. Thomas, Capt. E. H. Musgrove, South Wales Borderers, on account of ill-health. He is granted the honorary rank of Captain (April 2nd, 1916).

R.A.M.C. (Territorial).

Major J. Evans relinquishes his temporary rank on alteration in posting.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

The Dental Profession and the War.

MY DEAR SIR,—Your article in the last GAZETTE, entitled "Guy's Dental Department and Military Service," moved me to crave some of your valuable space for the following article, which deals with the broader aspect of the matter, viz.: Dental Surgeons and Military Service.

The present war has revealed to the dental profession that dental surgeons have no status whatever in the eyes of Government, the general public, the medical profession or the army authorities. They are regarded as, and mainly used as, combatants.

If we examine the Dental Register we find 5,485 names, only 4,134 of whom represent qualified men. The men of military age will be found among the latter as the balance represents men put on the register at the time of the passing of the Dentists' Act, as being then in "bona fide" practice; they are therefore now over military age.

Some 1,000 or 1,200 registered dentists are now in the army, of whom less than 500 are serving as army dental surgeons. Even these are not members of the R.A.M.C.

In spite of all representations made by the British Dental Association to the military and R.A.M.C. authorities as to the expediency, in the interests of the health of both the public and the army, that dental surgeons should only be employed in their professional capacity, ths iniquitous proceeding of making them combatants still goes on.

The Military Service Acts have reduced the qualified man to the level of the quack. The same treatment is meted out to both and the quack is even allowed to describe himself as a dentist when before the tribunals. The dentist has no tribunal analogous to the Central Medical War Committee and its sub-committees, which deals with their medical brethren. This despite the fact that they are governed by a special Act of Parliament as are medical practitioners, and are under the control of the medical profession, though unrepresented on the General Medical Council.

The very great majority of the Military Service Tribunals are blind to the value of the dentist's services to the State and indifferent to their relation to public health. They seem wilfully incapable of differentiation between the qualified and unqualified man.

This is leading to a very serious state of affairs, which is going to react disastrously on the question of public health, both at present and in the future. The younger men among dental surgeons are becoming disgusted with their lot and filled with a sense of injustice at the position in which they are placed. After years of study and heavy expense to qualify themselves to practice a particular branch of surgery, they

find they are regarded as of little or no importance to the community, and as something quite outside the domain of medicine or the public health services. It cannot, therefore, be expected that dentists with any keenness or self-respect will continue to practice if they can see their way to take up general practice. Neither can it be expected that the best type of man will be attracted to this branch of surgery when he knows that when he has been to the pains and expense of qualifying he is nothing more han an outsider.

You may get a type of man which merely regards dentistry as a means of making a livelihood, but there is no necessity for such, in the present state of the law, to bother about qualifying. Proper status and just treatment, both by Government and the medical profession, must be meted out to dental surgeons, or else this branch of surgery will finally remain with the quacks.

As I have already indicated, the attitude of the medical profession to the dentist is, in some measure, to blame for this state of affairs. Although the attitude of the individual general practitioner to the individual dentist is often cordial and considerate, it cannot be denied that the medical profession in general regards the dentist as an order of being far inferior to themselves and not to be co-operated with in the corporate sense in any way or for any object.

For instance, the B.D.A. approached the B.M.A. in the early days of the war with the proposition that they should co-operate to place the dental surgeon on the same footing as the general practitioner as regards recruiting. They were wholly and definitely repulsed, and that attitude is maintained to-day.

The medical profession must, here and now, make up its mind whether or no it will regard dentistry as an integral part of the profession of medicine. If not, it must be prepared to be handicapped by a permanent deficiency in the number of men practicing that speciality, who will be of an indifferent type. If it does so recognise dentistry, it loyally and cordially co-operates with the dental surgeons to obtain an equality of status and treatment. Had this generous and enlightened attitude been adopted in the early days of the war, the present deplorable state of affairs would not have arisen. The medical profession can command the attention of authority; the dental profession alone cannot.

There is no need to urge on a medical audience the importance of dental surgery in the domain of preventative and curative medicine. The necessity for this field of surgery being developed is well known and the shortage of dentists fully recognised, as instanced by the recent proceedings of the General Medical Council. In the interests of the medical profession and the public the prejudice against dentists must be broken down.

Let us briefly look at the dental organisations of the various armies of the Allies. The Canadians have a very efficient Army Dental Corps comprising a personnel of 2000, with a colonel as director general. These include dental surgeons, mechanics and orderlies. A reasonable number when the small size, comparatively, of the Canadian contingent is considered. The Australians have a similar arrangement. The French have over 1000 qualified men, apart from many attached to hospitals. The Americans, with their usual thoroughness and respect for that which will effect economy and increase efficiency, are tackling the problem in an effective manner. The Dental Corps is to form part of the Medical Corps. The present establishment is one dental surgeon per 1000 men, and it is even proposed to increase this to one per 500 men. Dental surgeons are to be on an entire equality with their medical colleagues and will receive equal rank and status. There is no suggestion that qualified men should be used as combatants. The American does not waste specialised skill like that.

To turn to our own army. We have less than 500 army dental surgeons to look after an army that runs into millions of men. There are 600 or 700 serving as combatants, many as privates.

The loss of effectives, because of lack of proper dental treatment, must run into many thousands. I have been told by R.A.M.C. officers that the recovery from sickness and wounds is in many cases markedly delayed by the presence of oral sepsis, which they are unable to get removed owing to the lack of skilled assistance. I have heard of many instances of rest camps full of men sent down from the line unfit, solely on account of the condition of their mouths. This sort of thing spells waste of man-power. One comes across innumerable instances of great suffering borne by men on active service simply because there are not sufficient army dental surgeons to attend to them. Surely simple humanity would prompt the provision of means of relieving the unnecessary suffering of these men, who have quite enough discomfort apart from dental and allied troubles.

In fact, if a man happens to be a home service man or in a labour battalion, he is debarred by the regulations from receiving dental treatment. Can anything more grotesque or absurd be imagined? Such a state of affairs is a slur on a civilised nation, and every effort must be made to remedy it. To effect this, combined action between the medical and dental professions must be taken. Pressure must be brought to bear on the R.A.M.C. authorities very greatly to increase the army dental establishment, to place dental men on the staff, and to stop recruiting dental surgeons as combatants.

Surely when the welfare and happiness of our soldiers is in question, it is not much to ask such co-operation, especially when it is borne in mind that the provision of an adequate army dental organisation would materially lighten the work of the army doctors.

The settling of this matter in relation to the army and the due recognition of the status of dental surgeons would go a long way to solve the after-the-war problem

of the provision of adequate dental treatment for the general public.

As an expression of personal opinion, I think the separate organisation and diploma of the dental surgeon a mistake. He ought to be a member of the medical profession and dental surgery simply a speciality. just as ears, nose and throats. eyes, etc.—Yours faithfully,

W. BULLEID, L.D.S. Eng.

1, Burlington Gardens, W. 1.

Infant Centres.

DEAR SIR,—National Baby Week has come and gone and has aroused immense interest in both town and country, and from our personal experience we feel that we should like to thank Dr. Cameron for his article in the GAZETTE of June 16th on "The Need for an Infants' Centre at Guy's Hospital. May his House Beautiful soon arise. Looking through one of the GUY'S GAZETTE'S of 10 years ago, we read it was a dream of the near future! Many Ante Natal Cliniques—Midwifery Schools, and Infant Welfare Centres have been started all over the country—or existing ones improved since then.

Save the babies, we are told. Where are we to begin? 500 Guy's nurses are away on Military Service, we read in the papers—"doing their bit"—all honour to them, we hope, as the opportunity arises, to join them. Meanwhile, not a day passes but it is brought home to us that: "It is safer to be an infantryman in France than a baby under a year old in England," While 9 soldiers died every hour in 1915, 12 babies died at home, and it is estimated that at least as many die during the nine months before birth.

Since August of last year, as far as our very limited space has permitted, we have been endeavouring to carry out, quite unofficially, Dr. Cameron's suggestions, and we feel we cannot state too strongly how mothers, babies, and the nurses would benefit by the establishment of a Guy's Pre-Natal Clinic, in conjunction with a Midwifery School, on the lines set out in his letter.

Nearly every one of the women of Southwark, who have been given a Maternity card from the Hospital, have been seen, at least once, before their confinement, in their homes, and we can testify to the mutual help it has been to the prospective mother and the nurse. At Guy's there is a unique opportunity for a Welfare Centre, in as much as the Hospital has the pre-natal and midwifery work in its hands, both in Bermondsey and Southwark. We learn as many lessons as we try to teach, and the majority of the women err through ignorance, *not* through want of love or lack of interest in their children, as one sometimes hears from people who have never worked in the homes of the poor.

Watch the struggles of a nurse on a Wednesday afternoon—in a district class room—undressing and dressing a normal infant for the first time, and it is easy to see, that "instinct" cannot teach a woman all she should know about babies. How then can the mothers be taught, which we find they are quite willing to be, unless there are people to teach—and how can people be qualified to teach unless they have previously been well taught. What old Guy's nurse does not know the limited space of the District class-room and the accommodation of the hall of No. 10. 760 babies have passed through and in passing have been weighed and generally overhauled in the said class-room since July 4th, 1916, but the mothers cannot be encouraged to come regularly —to learn how to keep themselves and their children healthy—and so lessen the work of a busy physician who ministers to the sick ones because there is neither the financial basis, the accommodation, or staff to deal with them.—Yours, etc.,

THE PRESENT DISTRICT NURSES.

Guy's Hospital Maternity Charity,
10, St. Thomas's Street. London, S.E. 1.

Appointments.

Medical School Appointments.

JULY–SEPTEMBER, 1917.

Dressers or Clerks in Special Departments:—

A. *Throats* (Mr. Mollison). *Orthopædics.*—Messrs. W. H. Grace, A. R. Neckles, A. L. S. Payne and S. A. Withers.

B. *Throats* (Mr. Layton). *Genito-Urinary.*—Messrs. J. Joffe and S. Wolff.

C. *Children, Eyes* (Mr. Eason).—Messrs. A. R. Doyle, W. A. Hawes, E. H. L. LeClezio and H. O. Long.

D. *Skins, Nerves, Eyes* (Mr. Ormond).—Messrs. W Gover, G. Meadows, G. V. Richards, R. D. Roberts and G. A. S. Shacklock.

Obstetric Dressers.—Messrs. H. G. Burford, C. L. Curle. L. S. Debenham, F. W. Reitz, G. M. Thomas, J. E, van der Merwe, C. Gill-Carey and W. H. Steavenson (Mr. Bellingham Smith); H. F. G. Berncastle, F. K. Escritt, C. Moffatt, A. A. Osman, C. G. D. Siggs, W. H. Simmons and E. F. Kerby (Mr. Chapple).

Surgeons' Dressers.—Messrs. P. J. Briggs, W. G. Hay, G. F. Peters and R. S. Ralph (Sir Arbuthnot Lane); G. R. Aspinwall and S. H. Robinson R. Gainsborough, K. M. K. Duff (Mr. Dunn); C. V. Brown, M. F. Ismail, H. N. Schapiro and R. W. Warrick (Sir Alfred Fripp); T. G. D. Bonar, W. H. Cellier and R. B. P. Lansdown (Mr. Steward).

Extension Medical Ward and Post-mortem Clerks.—Messrs. G. A. A. Bradnack and H. M. Brown (Dr. Hale White); K. Mullen and E. R. Webb (Dr. Shaw); G. B. Dowling, C. H. Horwitz and L. Lyne (Dr. Fawcett); G, Hume, J. Kendall and H. W. Southgate (Dr. Beddard).

Assistant Surgeons' Dressers.—Messrs. L. Lavine (Mr. Fagge); S. T, Barrett and I. R. Florence (Mr. Rowlands); A. M. Mishad (Mr. Hughes).

Medical Ward Clerks (first three months). – Messrs. H. Ameen, J. G. Barrie, J. V. C. Braithwaite, W. Mark Brown, L. Burvill-Holmes, M. Cohen, W. T. Flooks, E. E. D. Gray, R. C. B. Ledlie, G. Massie, W. W. Payne, T. Reed, G. K. Reeves, S. Rose, C. H. St. John, A. E. Sawday, B. M. Tonkin, J. E. Wright and W. R. Carling.

Pathological Assistants to the Demonstrators of Morbid Anatomy..—Messrs. T. G. D. Bonar and H. W. Southgate.

Clerk in Surgical Out-Patient Department.—Mr. H. S. Morris.

R.N.M.S.

Surg.-Prob. St. George B. D. Gray, R.N.V.R., to H.M.S. *Pelorus.*

Civil.

W. C. Whitworth, M.R.C.S., L.R.C.P., has been appointed temporary Medical Officer for the St. Agnes and Perran Districts by the Truro (Cornwall) Board of Guardians.

C. E. Hicks, M.R.C.S., L.R.C.P., has been appointed District Officer of the Huntingdon Union.

Guy's Hospital.

Appointments.

The following re-appointments and appointments have been made by the President upon the recommendation of a Staff meeting, for a period of one year to September 30th, 1918, or to the conclusion of the war, whichever shall be the earlier date :—

A.—Hospital and Medical School.

Medical Registrars.—Drs. N. Mutch, *H. W. Barber, *T. B. Heaton.

Surgical Registrars and Demonstrators of Anatomy.—Messrs. A. H. Todd, *R. C. Ozanne, *E. G. Schlesinger, *G. T. Mullally, A. M. Zamora.

Ophthalmic Assistants.—Messrs. C. M. Ryley, *J. S. Bookless.

Obstetric Assistants.—Messrs. *A. J. McNair, A. D. Marston.

Resident Surgical Officer.—*Mr. W. E. Tanner.

Anæsthetists to the Hospital.—Messrs. A. H. Todd, *A. J. McNair, *G. Marshall, *G. T. Mullally, *R. C. Ozanne, A. M. Zamora.

Anæsthetist to Bright Ward.—Mr. A. H. Todd.

Demonstrators of Operative Surgery.—Messrs. *L. Bromley, A. M. Zamora.

Senior Demonstrators of Anatomy.—Messrs. *L. Bromley, A. M. Zamora.

Lecturers on Pharmacology.—Drs. *A. J. Clark, P. P. Laidlaw.

Demonstrators of Physiology.—*Mr. G. Marshall, Dr. M. S. Pembrey.

Demonstrator of Biology, with Anatomy and charge of Dental Students in the Dissecting Room.—Mr. T. Reed.

Morbid Histologist.—Dr. G. W. Nicholson.

Douglas Demonstrator of Pathology.—*Dr. G. W. Goodhart.

B.—Dental School.

Demonstrator of Prosthetic Dentistry.—Mr. E. A. Tomes (for a period of one year from 1st September, 1917),

Demonstrators of Practical Dentistry, with charge of Revision Classes.—Messrs. F. N. Doubleday, *G. B. Pritchard.

Demonstrators of Practical Dentistry, with charge of Probationary Classes.—Messrs. *W. K. Fry, *W. S. Stranack, H. L. Thorn.

Demonstrator of Practical Dentistry, with charge of Extraction Classes.—*Mr. L. Price Harris.

Demonstrators of Dental Microscopy.—Messrs. *H. C. Malleson, F. N. Doubleday, *G. Marshall, Dr. M. S. Pembrey.

Resident Dental Officer.—Mr. F. B. Bull (if called up, Mr. H. L. Thorn).

Demonstrator of Orthodontics.—Mr. F. B. Bull.

Dental Radiographer.—Mr. H. L. Thorn.

Curators of Dental Museum.—Messrs. *E. B. Dowsett, J. Lewin Payne.

Special Tutor for Dental Students.—Mr. A. R. Thompson.

*Absent on military service. To be granted further leave of absence until 30th September, 1918, or the conclusion of the war, whichever shall be the earlier date.

Until Mr. Bromley's return, Sir Cooper Perry has been appointed Dean of the Medical School (honorary), and Dr. Pembrey as Sub-Dean.

June 28th, 1917.

Change of Address.

Surg..Prob. St. George B. D. Gray, from H M.S. *Staunch*, to H.M.S. *Pelorus*, c/o G.P.O.

Capt. C. Jephcott, R.A.M.C. (T.), from c/o 4/5 North Lancs. to 7th C.C.S., B.E.F.

Surg. F. G. Lloyd, R.N, R.N. Depôt, Immingham Dock, Grimsby.

Capt. V. E. Lloyd, R.A.M.C., from 67th H.A. Group to 17th F.A.. 6th Division, B.E.F.

Capt. C. P. Symonds, R.A.M.C., 11th Stationary Hospital, Rouen, France.

Lieut. W. H. Robinson, R.A.M.C., 32nd British General Hospital, Amara, Mesopotamia, to 28, Newmarket Street, Skipton-in-Craven, Yorks.

Capt. L. Bromley, R.A.M.C., from Guy's Hospital to 60th General Hospital, c/o G.P.O.

Capt. S. S. B. Harrison, R.A M.C., att. 1/5 S. Staffordshire Regiment, B.E.F.

Capt. Donald Clewer, from 55 (London) C.C.S. to B.E.F., France.

Dr. Carl Westman, from 76, Wimpole Street, W. to 2, Brunswick Place, Harley Street, N.W. 1. Telephone Mayfair, 2130.

Pass List.

Oxford University.

Examination for Diploma in Public Health.

At the above Examination held recently E. Clarke-Cohen, was successful.

University of Durham.

(Materia Medica, Pharmacology and Pharmac y PublicHealth, Medical Jurisprudence, Pathology and Bacteriology).

At the Third Examination for the Degree of Bachelor of Medicine, Louis Lavine was successful.

Society of Apothecaries of London.

Primary Examination. Part II.

At the Examination held July 2nd, 4th, and 5th, the following candidates were approved in the undermentioned subjects :—

Anatomy.—M. A. R. Khalifa, E. T. Lloyd, G. P. Lindsay, J. B. McCann, W. H. Summerskill, E. F. Wilson.

Physiology.—C. C. Becker, E. T. Lloyd, G. P, Lindsay, J. B. McCann, M. S. Mahmud, P. L. Richardson, W. H. Summerskill, W. H. Turner, E. F. Wilson.

Birth.

FALWASSER.—On June 23rd, at Warwick House, Maidstone, the wife of Lieut.-Col. A. T. Falwasser, R.A.M.C. (T.), of a daughter.

Death.

MILWARD.—On June 18th, at Stanton Road, Wimbledon, James Milward, M.D.,M.R.C.S., Eng., L.S.A.

J. J. C.

GUY'S HOSPITAL GAZETTE.

VOL. XXXI., No. 758.] JULY 28, 1917. [SIXPENCE.

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Passim.

IT must by now be realised by all that House Appointments are no longer necessarily a proof of either efficiency or industry on the part of those who hold them. Before the war to have reached the position of House-Physician or Surgeon at Guy's was an honour which comparatively few could hope to attain. Since the number of men qualifying has been seriously cut down by the war, it is rare to find instances where any applicant has been refused.

Probably these facts are realised as clearly by men who have lately done qualified appointments here as by any others, but if we cannot hope to emulate our pre-war Residents in technical skill and clinical experience, we can at least attempt to make up for such deficiences by a close and continuous attention to the duties undertaken. We fear that there are some who have not fully realised their extraordinary good fortune in obtaining appointments, and who, in consequence, have not made the best of their opportunities. Before the war a Resident hesitated to leave his work even for a day. This can hardly be said of some who have done appointments in recent times.

We hope our remarks will not be taken in a personal sense, or as applying to any particular group of Residents, but we cannot help feeling that Residents in war time must be willing to work at least as hard if not harder than their predecessors. That the majority do their work as conscientiously and attentively as possible there is ample evidence, and we hope that our remarks will only be taken as a warning by those who need it.

DURING August and part of September, Luke and Charity are to be evacuated for cleaning and renovations. We understand Sir Alfred Fripp's firm is to be distributed among other surgeons. We hope that Mr. Bamber, who has so ably fulfilled the duties of President of the Residents will be thereby enabled to take a much-needed holiday. The Hospital owes him much gratitude for the hard and continuous work he has done as Assistant House-Surgeon, Out-Patient Officer, and House-Surgeon.

We hope that we shall have the pleasure of congratulating several of the present Residents on receiving appointments for a further three months. The departure of Mr. Gill, who has for three months been extremely popular among

all as Sir Arbuthnot Lane's House-Surgeon, will be a source of regret to many. We wish him and all others who are leaving us for service in the R.A.M.C. every success in their new sphere of action.

IN the recent Conjoint Examination the candidates from Guy's have been remarkably successful, though, of course, as in all examinations there have been a few disappointments. The gloomy opinions held by some authorities that the employment of students in unqualified appointments such as Assistant House-Physician and Assistant Casualty Officer would tend to delay the holders passing examinations does not appear to be borne out by the facts. Of the ten unqualified men who have been holding house appointments during the last three months, nine have been in for one or more parts of the Conjoint during the last few weeks and seven have passed their examinations. This shows clearly enough that the unqualified appointments help rather than hinder their holders from an examination point of view, while their value from the point of view of valuable clinical experience is undoubted.

In this connection we may point out that the whole of the work done formerly by four qualified Out-Patient Officers has during the past three months been carried out by four unqualified Assistant Casualty Officers. Everyone who has had to deal with the Out-Patient Department and the Surgery will agree that they have done their work splendidly, and quite as efficiently as it has ever been done. The Assistant House-Physicians under the supervision of the House-Physicians have done a great deal to maintain the high standard of work in the Medical Wards.

IT appears that the War Office is at last beginning to realise that a number of students are holding paid appointments at private war and other hospitals with the result that their qualification is delayed. It is now possible to get as much as £4 a week while unqualified. A certain number of men naturally prefer to remain unqualified while they can hold such appointments. We understand that in future the War Office is likely to make unpleasant inquiries into the circumstances under which students fail in their examinations or refuse to go in for them.

WE have received a Memorandum issued to Local and Appeal Tribunals by the Local Government Board on July 13th last on the subject of registered dentists. Tribunals are instructed to deal with applications for exemption by registered dentists with due regard to a decision issued by the Central Tribunal. This decision is given in a foot-note and runs as follows : "The Central Tribunal, from evidence submitted to them, are impressed with the danger of further reducing the number of registered dentists now in the country. Whether any particular dentist should be granted exemption must obviously depend to some extent upon the requirements of the place in which he practises, but they are inclined to think that unless it is shown that his services are not required he should be granted exemption."

The Memorandum further states that the Army Council have agreed that if a registered dentist is over 35 years of age, or if he is not passed for general service, he will not be taken for service otherwise than in his professional capacity, provided that he places himself at the

disposal of the Dental Service Committee, in order that his services may be utilised in a district in which there is urgent need for dentists.

The Dental Service Committee is at present in process of formation, and will contain representatives of the British Dental Association, and of the Government Departments concerned. The Committee is to ascertain in what districts there is an urgent need for dentists.

The Memorandum is to be welcomed as at any rate showing some attempt to deal with the status of dentists and war service. The most unpleasant feature is that apparently men over 35 are to be blackmailed into doing civil work in special districts by the threat of being called up for military service. No attempt is made to deal with the question of unqualified dentists, though many of these have been exempted by tribunals on the ground that they are doing work of national importance. It is to be hoped that in the estimation of the dental requirements of a district, the qualified men will not be sacrificed, while the unqualified are allowed to remain.

We fear that the results of the calling up of medical men on the welfare of the civilian population are beginning to be felt. Those who are responsible for dealing with acute cases sent up to the Hospital are finding that the work of the general practitioner is gradually becoming less efficient. Acute abdominal cases are constantly being admitted which must have been perforated for some days, and it is not infrequent to meet acute medical cases which have been attending panel doctors for some weeks unexamined and undiagnosed. It must be fully realised that at present general practitioners are working at high pressure and it is probably quite impossible for them to examine every case. Though a man who has sat on an empyema for some weeks cannot help feeling a criminal, he cannot under the present stress of circumstances be as severely blamed as in normal times. We fear that unless something drastic is done to curb the excessive demands of the Army Medical Authorities, the civil population, especially the poorer classes, will have to suffer more heavily.

We are glad to hear that Capt. E. Biddle has visited the Hospital while on leave from service in France. We have much pleasure in congratulating him on the award of the Military Cross, which was bestowed on him recently.

Change of Address.

Capt. E. Stuart Taylor, R.A.M.C., from 2nd London C.C.S. to 54 C.C.S., B.E.F.

Cadet J. A. Currie, R.A. School of Gunnery, 182nd Course, Shoeburyness.

Capt. Donald Clewer, attached R.A.M.C., from 55th (London) C.C.S. to 4th Army Dental Centre, B.E.F., France.

Capt. W. P. H. Munden, R.A.M.C., from Ilminster, Somerset, to R.A.M.C. Mess, Aldershot.

Surg. H. W. Eddison, R.N., R.N. Hospital, Chatham.

Lieut. E. R. Saul, to A.D.M.S. Office, Grafton Rooms, Bedford.

Temp. Lieut. A. S. Morton Palmer, Hôtel Métropole, Blackpool.

Capt. F. V. Bevan-Brown, R.A.M.C., Indian Expeditionary Force, Mesopotamia.

Honours.

Mentioned in Despatches.

Staff: Major H. V. Bagshawe, R.A.M.C., D.S.O.

R.A.M.C.: Major (temp. Lieut.-Col.) J. Evans, Temp. Capt. H. V. Leigh, Capt. C. F. Searle.

I.M.S.: Lieut.-Col. A. J. Wilcocks.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

[We would point out that we cannot *under any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—ED., G.H.G.]

DEAR MR. EDITOR,—In your comments upon the generous gift of the late Dr. Milward, I think, perhaps, you did not make sufficiently clear that his bequest was to his old School and not to the Hospital. In 1912 an appeal was made to all friends of the school to endeavour to provide endowment upon a scale sufficient to maintain in the future the traditions of the past. In that year and in the two following about £50,000 was subscribed. I wrote at the time to all old Guy's men, asking them to help by arousing the interest of any among their patients or friends who might have it in their power to assist our project. Especially I urged that old Guy's men who had property to bequeath should "mention us within their wills." In response I had many kind letters, and two told me that my suggestion had forthwith been acted upon. Of these, Dr. Milward was one. That there are many others I do not doubt.

In August, 1914, the war intervened to divert our attention to other things, yet I think the present time is one in which a good cause ought not to be allowed to languish for want of support. We have Mr. Bonar Law's personal assurance that money is being made by some people somewhat easily and from unexpected sources. There are others, too, whom the war has left very poor, not in wealth, but in all the things that make men value wealth.

For a good cause, money should be forthcoming at the present time, and there must be many who, like Dr. Milward, appreciate the need for the endowment of the medical school as a place for teaching and research.—Yours truly,

H. CHARLES CAMERON.

Guy's Hospital,
London, S.E.
July 24th, 1917.

War Emergency Fund of the Royal Medical Benevolent Fund.

SIR,—The time has come to make a further appeal for the War Emergency Fund.

This fund was instituted last year to afford assistance to members of our profession who, in consequence of having joined the Army Medical Service, find themselves in temporary difficulties.

Many medical men, when called up, had to leave on very short notice, without time to make adequate provision for the continuance and maintenance of their practices during their absence. As a result they have had to face a severe fall in income even when supplemented by army pay; while many expenses, such as rent, insurance, taxes, family maintenance, and education, could not be reduced. Although in a year or two after their return it may be hoped those affected will recover their position, still in the interval help is, and will be, necessary, and it is to meet these needs that the War Emergency Fund was established.

To be effective the grants must be made on a liberal scale, and the fund from which they are to be drawn must be a large one. The sum obtained last year was about £4,000. This is quite inadequate, as at least £25,000 will be required, if even a small proportion of those requiring assistance is to be helped. From the wealthier members of the medical profession, it is hoped, substantial sums will be received, but every one should feel it a duty which he owes to his less prosperous colleagues to give the most liberal donation he can afford.

At the same time the appeal is not, and ought not to be, restricted to the medical profession. The public, too, may be rightly called upon to bear its share, and to show, by liberal contributions, its appreciation of the special services so freely rendered by the medical profession to the country.

The War Emergency Fund is a special department of the Royal Medical Benevolent Fund. It is kept separate and distinct from the ordinary operations of the general fund, and is under the management of a Committee specially appointed for the purpose.

Communications should be addressed to the Honorary Secretary, War Emergency Fund, 11, Chandos Street, Cavendish Square, W. 1, to whom cheques should be made payable.—We are, etc.,

SAMUEL WEST, President.
CHARTERS J. SYMONDS, Col. A.M.S.,
Honorary Treasurer.
G. NEWTON PITT, Major R.A.M.C.(T.
Honorary Secretary.

London, W. 1, June 8th.

Royal College of Surgeons.

AN interesting exhibition of pathological specimens collected during the war is on view at the Royal College of Surgeons. There are also a few specimens dating from Waterloo onwards, which are interesting for purposes of comparison.

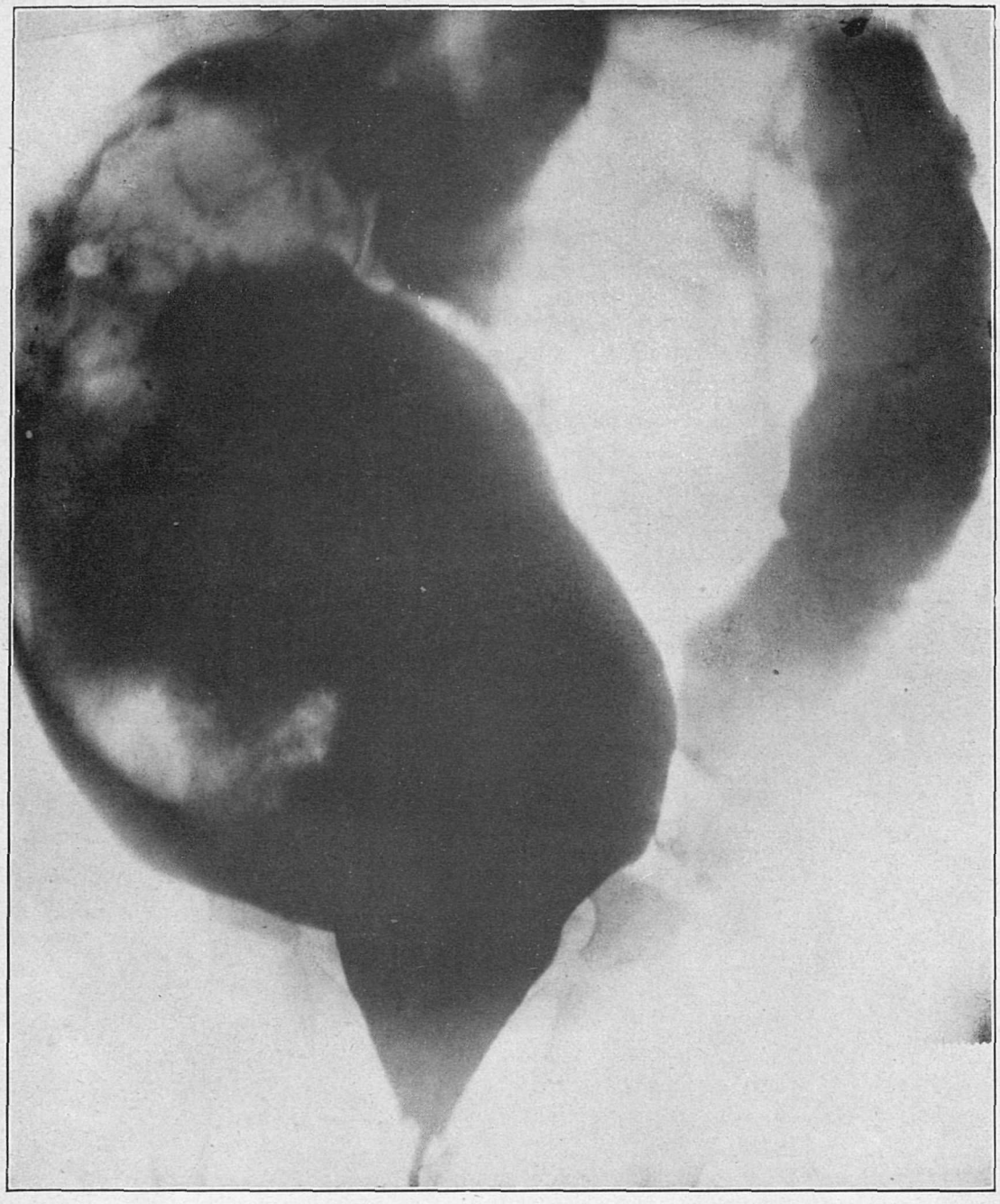

Fig. 1.

Illustrating Dr. Cameron's Clinical Lecture

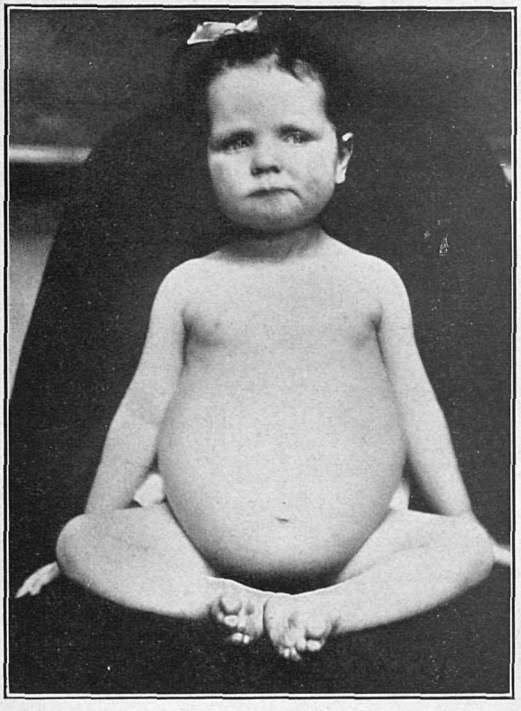

FIG. 2.

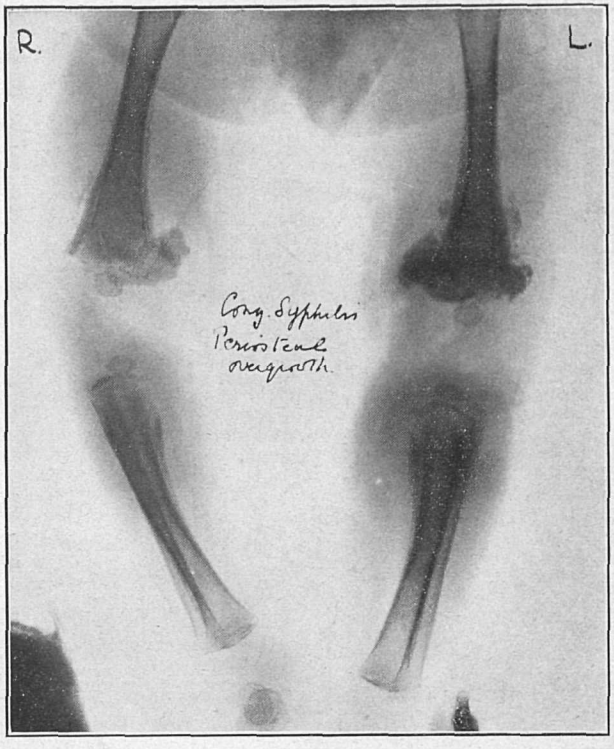

FIG. 4.

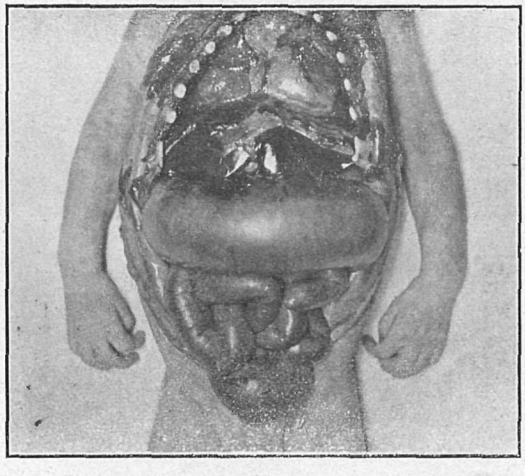

FIG. 3.

Cases from the Children's Department.

CLINICAL LECTURE BY DR. CAMERON.

CASE 1.—*Hirschsprung's disease (megalocolon congenitum).*—Gladys B. is 3 years old. For the first six months of life she had good health and was breast-fed. At six months she contracted whooping-cough, and from that date the mother says the stomach began to swell. Gradually constipation became very troublesome. At 18 months old she attended a Children's Hospital for this. On one occasion the bowels were *not* opened for six weeks. The mother stopped attending the children's hospital because the doctor refused to believe this statement, the truth of which she still maintains. The condition in the last six months has become worse. At intervals of about three weeks the abdomen becomes distended to an even greater extent than usual, and there is abdominal pain and vomiting. As a rule the bowels are opened every two or three days, but the amount passed—according to the mother—is very small. The child is small for her age, with a huge and prominent abdomen (Fig. 2). As one watches it, from time to time a wave of peristalsis may be seen passing across the epigastrium from right to left; or again in the lower part of the abdomen, below the umbilicus. A rectal examination is difficult because the finger is gripped so tightly by the sphincter. When the resistance is overcome, the finger passes into a rectum which is very capacious. I show the X-ray appearances after injection of a bismuth enema (Fig. 1). The distended rectum and the pelvic colon passing to the right hand side of the abdomen are well seen. The enlarged descending colon is also outlined.

The case is one of so-called Hirschsprung's disease. Of the cause of this disease we know nothing. No demonstrable obstruction is ever found, and it is clear from the X-ray examination that none is present here. Clinically the condition may give rise to no symptoms other than constipation and enlargement of the abdomen, or there may be periodic attacks of distension and abdominal pain which make life miserable or unbearable. More striking disturbances may be due to secondary infection of the bowel wall as the result of the retention of its contents, and a fatal ending may be accompanied by evidence of acute colitis. This was the cause of death in a second case which was in the Infants' ward last week, and on which a post-mortem was performed by Dr. Poulton on Monday last. It is, I think, the youngest case recorded. I show the photograph (Fig. 3) of the hughly distended colon as it appeared in the post-mortem room, kindly taken for me by Mr. Steavenson. The child was but ten days old; the bowels were open freely; the abdomen was very distended and the coils of the colon could easily be seen contracting during life. The temperature was much raised, often as high as 104°. It was obvious that the baby was very ill. We had only time to make a hurried examination with a bismuth enema, the radiogram of which I show you. Its resemblance to the other case is very striking; there is the same enlargement of the descending colon and of the pelvic colon and rectum. In both cases the pelvic colon reaches the right lobe of the liver. The child died soon after admission. Post-mortem, in addition to the great dilatation and hypertrophy of the bowel, there was evidence of acute colitis. In the Out-Patient Room, when this child was first brought to me, I called attention to the great enlargement of the veins over the abdominal wall as characteristic of Hirschsprung's disease in early infancy, and in keeping with this were the greatly enlarged veins which coursed along the mesentery of the huge colon.

In practice we meet with Hirschsprung's disease in two sets of cases, and we have here an example of each. Death may occur in the first few weeks or months of life from an acute colitis, or the condition may be comparatively symptomless for many months or years. In severe cases such as these shown, I doubt if medical treatment is of any avail. If it is impossible to keep the bowel comparatively empty by a routine washing, and if abdominal pain and distension become frequent and distressing, so that life is not likely to be prolonged if nothing is done, an operation may be attempted. A colotomy is here very dangerous and must not be employed. The weight of the bowel and the strong peristalsis will almost certainly drag the colon from its moorings with disastrous results. The right treatment would appear to be to perform ileo-sigmoidostomy, planting the ileum as low down as possible in the hypertrophied rectum, which, because of the small pelvis of the child occupies a relatively high position; and at a later stage, perhaps after some months, to follow this by colectomy.

CASE 2.—*A case of infection with Lamblia Intestinalis in a child living in Southwark.*—Rosina B., aged 8, is said to have had diarrhœa on and off all her life. In the last two years the condition has become worse. At times she is said to pass a great deal of "jelly" and blood, and sometimes there is vomiting, like coffee-grounds. Often the bowels are opened ten or twelve times in the day; in some attacks every ten minutes. Even on a good day the bowels will be opened five or six times. The child also complains of abdominal pain on the right side. She is small for her age, not so well grown as her younger sister, and lacking in colour, vigour and strength. She was brought to Guy's Hospital six months ago to another department where the diagnosis of tuberculous peritonitis was made, and she was sent into the country. The abdomen is not now distended, and I do not think there is any evidence of tubercular peritonitis at the present time. In the stools are found innumerable cysts of lamblia intestinalis.

Lamblia is a pear-shaped organism of microscopic size, possessed of three pairs of flagellæ and a sucking organ by which it attaches itself to one of the cells lining the small intestine. In bad cases the whole of the mucous membrane to the naked eye may appear covered with a fine white coating due to the presence of innumerable parasites. The organism itself does not inhabit the large intestine except in the encysted form. The cyst is a small oval body with a central partition, dividing it into two halves, each of which contains a developing lamblia. The stools of this child swarm with these cysts. The history suggested some unusual cause, so that I admitted her for observation. I owe the discovery of the condition to Dr. Ryffel and Dr. Laidlaw. Infection with lamblia is said to occur with some frequency even in this country, but I have not met with another case, because I have not looked for it. The organism is said not to be pathogenic, and to give rise to no symptoms. It is possible that lamblia, like the common thread worm, or the organism of thrush, is very widely spread, but requires for its free development an accompanying catarrh of the mucous membrane. Here the cysts are so numerous that it is difficult to believe that their presence is not in part the cause of the irritation. It is said that the infection is very resistant to treatment, although from time to time the numbers of cysts diminish so much that they may be difficult to find. Treatment first with sulphur and later with large doses of quinine sulphate has not been successful.

CASE 3.—*Acute eczema in an infant.*—I show this child, aged seven months, only to emphasise the ill-effects of treating eczema in in-

fancy by means of applications held in place by bandaging. Those of you who saw this child at Out-Patients will remember that when he came to me his scalp and face were covered with lint and ointment, and swathed in bandages. On removing the lint, the entire area previously covered was found to show very acute eczema, reddened and weeping profusely, whilst the parts which had been exposed and lay just beyond the line of the bandages—the skin around the eyes and nose, for example—showed the same eczematous process, but dry and much less acutely inflamed. The treatment has been to remove all bandages, to lay the head upon a sterilised towel whilst another sterilised towel envelopes the shoulders, both being kept in position by dressing forceps. A powder of zinc and boric acid has been dusted on the affected parts. The child has made very good progress. The eczema of little children is apt to do badly if bandages are used. The rapid spread of eczema whenever it occurs on the buttocks under the napkin may teach us the danger of excluding air and increasing the moisture of the parts.

In little children, too, dietetic treatment is of some importance. Acute eczema usually occurs in fat and watery children, and a diet poor in salts and poor in sugar is indicated. The so-called albumen-milk is constructed to suit these requirements; and this child is being given $1\frac{1}{2}$ pints per diem. Albumen-milk is made as follows:—A pint of milk is curded with rennet and the whey rejected. The curd is then broken up finely by squeezing it through the very finest butter muslin. When in a state of sufficiently fine division it is added to a mixture containing half a pint of soured skim milk and half a pint of water. We thus have a mixture containing the curd from $1\frac{1}{2}$ pints of milk; the fat from a pint of milk, the sugar and salts from half a pint of milk. The nurse in charge of the Baby Room will make it as I lecture, and you can taste it for yourselves.

CASE 4.—*Atrophy treated by malted milk.*—I show you this child, aged 20 months, who is suffering severely from atrophy. We cannot detect any real organic disease, but her weight is only 13 pounds. Many atrophic children improve and grow very rapidly for a time upon a diet containing very large quantities of carbohydrate. The pictures on the hoardings of the marasmic child shown before and after treatment with some carbohydrate patent food are not infrequently true enough. If the proprietors of the Food confined their claims to such cases, less harm would be done. It is when they argue that healthy children should be fed upon the preparation because unhealthy children have improved by its use, that the claims become irrational. We must distinguish between the diet of health and modifications of the diet for therapeutic purposes.

This child has been fed upon a malted milk made in the ward, and has rapidly gained in weight. For some reason or other the peptonising of milk still remains part of sick room cookery, but the making of malted flour seems to have gone out of fashion. Nowadays nurses and mothers commonly rely entirely upon the proprietary preparations of malted flours—Allenbury's, Horlick's, Mellin's, and so forth. To make a good malted milk in the ward is not a difficult process and in making it we follow the original prescription of Liebig, who first showed the improvement which followed in some wasted children if they were given a mixture containing much malted flour. Upon Liebig's prescription all these proprietary foods have been founded. Just as our grandmothers made their own pickles and jams, whilst we buy them ready made, so, perhaps, it may be more convenient at times to purchase the proprietary makes which are dispensed in the form of dry powder requiring only the addition of

water. Nevertheless I think it important that all nurses and students should have a clear understanding of the nature of these foods and be able to dispute their claim to any peculiar or mysterious properties. This child is having malted milk, which you will now see prepared, and, as you see, has since put on weight steadily almost from the first day of taking it. The advantage of ourselves making the malted milk is that its composition and carbohydrate percentage can be varied at will. Its drawback is the increased tendency to fermentative diarrhœa, which it shares with the proprietary carbohydrate preparations.

In this jug we mix four teaspoonfuls of baked flour with a little milk until a fine paste is made, gradually adding more and more milk up to 12 ounces. In another jug we dissolve 10 teaspoonfuls of extract of malt in 24 ounces of water at a temperature of about 100°, and add 20 grains of sodium bicarbonate. Then we mix the contents of the two vessels and bring to the boil, keeping it boiling for two minutes.

CASE V.—*The X-ray appearances of the periostitis and epiphysitis of congenital syphilis (syphilitic pseudo-paresis).*—I show you the X-ray plate of a case of syphilitic epiphysitis in order to call attention to one or two points which I do not think are sufficiently emphasised in text books. In the first place, it is not very generally recognised how extensive these changes may be without any very obvious symptoms presenting themselves clinically. No doubt the condition is painful, and in consequence the baby resents having his legs moved, and is careful not to move them himself. But it is no very easy matter to appreciate the precise situation of tenderness in a young baby. At least it is not easy for the doctor who is making the examination, because most of the babies whom he examines are crying lustily whether they have syphilitic epiphysitis or not. The mother has generally better opportunities for observation, and it is well to pay attention to her opinion, if she is sure that the arms or legs are tender on movement. An examination with the X-rays will always clear up any doubts on the subject. More than once I have found this examination show very profound changes which were hardly appreciable to mere palpation, and, as a general rule, the condition is much more widely distributed and many more bones are affected than would have been otherwise suspected.

In the beautiful X-ray plate which I show you by Mr. Lindsay Locke, you see how striking the appearance is (Fig. 4).

The child was one of male twins, six weeks old. As sometimes happens in this condition, he showed no other sign of syphilis, save, perhaps a slight tendency to snuffles and a little pallor, which became significant when he was compared with his twin brother. It is curious that the brother shows absolutely no signs clinically of congenital syphilis. The mother and both children gave a positive Wassermann test. The mother brought the child for pain in the legs, and it was possible to palpate a thickening near the right knee-joint. Without previous experience of the results of X-ray examination I do not think anyone would have expected to find changes so obvious and so marked.

I show you for the sake of comparison the knee-joint of a child, two months old, which died under my care, with the same complaint, and upon which a post-mortem was performed by Dr. French. You see that towards the ends of the long bones the thickness of bone around the central medullary cavity is enormously increased and that the bone is dense and yellow. The periosteum has been stimulated to lay down a great thickness of bone. At the lower end of the femur there are some dense masses of bone

projecting outwards from the shaft. You see also marked changes in the epiphysis, and that a broad zone of irregular calcification takes the place of the usual sharply defined epiphyseal line.

If now you turn to the X-ray plate, you will see all these features shown in shadow. The increased thickness of the periosteal bone, the outlying masses of bone lying beyond the outline of the shaft and the irregular shadow of the line separating epiphysis from diaphysis. It is interesting and noteworthy, I think, that all these changes took place in a child who showed so little evidence of syphilis clinically, and that the twin brother should escape without symptoms at all.

Appointments.

The following appointments have been made:—

R.N.M.S.

Temp. Surg. H. W. Eddison to R.N. Hospital, Chatham.

R.N.V.R.

J. B. Gregor to be Surgeon Probationer.

A.M.S.

Major (acting Lieut.-Col.) H. Richardson to be Assistant Director of Medical Services, and to retain the acting rank of Lieut.-Col. whilst so employed.

R.A.M.C.

Lieut.-Col. J. C. B. Statham, C.M.G., to be temp. Colonel whilst employed as Assistant Director of Medical Services, Lines of Communication.

Temp. Lieuts. to be temp. Capts.: H. M. Gray, D. H. A. Galbraith, J. A. Edmond, H. L. Shelton, J. Goss, K. Black, W. H. T. Jones.

Major D. P. Watson relinquishes the acting rank of Lieut.-Colonel on re-posting.

Officers relinquishing their Commissions: Temp. Capt F. J. Wheeler, Temp. Lieut. G. Stivala Aspinall.

To be temp. Lieut.: A. S. Morton Palmer.

2nd Lieut. J. H. E. Winston to be acting Captain whilst commanding a Company, April 28th.

Army Dental Appointments.

Temp. Lieut. T. H. Griffin to be temp. Captain, April 6th.

K. C. Pitman (late temp. Capt.) to be hon. Lieut., July 12th.

Lieut. E. R. Saul has been appointed Advisory Dental Officer, Bedford District.

Special Reserve of Officers.

Major R. P. Lewis to be acting Lieut.-Col. whilst in command of a Field Ambulance.

Territorial Force.

Major (acting Lieut.-Col.) H. Richardson is seconded whilst holding an appointment as Assistant Director of Medical Services.

S.A.M.C.

To be Capt.: E. A. C. Knox-Davies.

Roll of Honour.

Wounded.

Lieut. H. R. Grellet, R.A.M.C., attached to Yorks. and Lancs. Regiment.

Casualties amongst the Sons of Guy's Men.

Killed in Action.

2nd Lieut. C. W. Goodall, S. Staffs. Regiment, second son of Dr. E. W. Goodall, of the North Western Hospital, Hampstead.

2nd Lieut. C. C. Lucas, Northhants Regiment, youngest son of the late Dr. R. C. Lucas, of West Lavant, near Midhurst, Sussex, and of Wimpole St., W.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

GUY'S HOSPITAL ROLL OF WAR SERVICE.

Further Additions and Corrections.

Anthony, M. ...	Temp. Lieut.	R.A.M.C.
Armer, A.	Temp. Lieut.	R.A.M.C.
Atkins, F. R. L. ...	Temp. Lieut.	R.A.M.C.
Ballard, R. P. ...	Capt.... ...	R.A.M.C., S.R. Mentioned in despatches, 1917.
Barrow, H. P. W. ...	L.Col.(Tp.Col.)	R.A.M.C. C.M.G., 1917. Mentioned in despatches.
Beadnell, C. M. ...	Fleet Surg. ...	R.N. Order of St. Stanislas, 2nd Class, by Russian Government, 1917.
Bent, V. T. C. ...	Temp. Lieut.	R.A.M.C. (Wounded, 1917.)
Bentley, R. J. ...	Temp. Lieut.	R.A.M.C.
Berry, J. Allan ...	Lieut. ...	N.Z.A.M.S. No. 3 N.Z. Gen. Hosp.
Bett, W.	Dp.-Surg.Gen.	R.N. M.V.O.
Beyts, W. G. ...	Brevet Col. ...	R.A.M.C.
Biddle E.	Temp. Capt....	R.A.M.C. Military Cross, 1917.
Birch, G.	Temp. Lieut.	R.A.M.C.
Bishop, C. A. D. ...	Capt.... ...	R.A.M.C. 23rd Res. Brigade.
Bolus, P. R.... ...	Capt.... ...	R.A.M.C. (Wounded.)
Bouic, J. A.... ...	2nd Lieut. ...	R.F.C. (Accidentally killed.)
Bowes, E. S. ...	Temp. Surg....	R.N.
Box, W. F.	Temp. Lieut.	R.A.M.C. 4th Canadian Hosp., Salonika.
Bridger, J. Dell ...	Temp. Lieut.	R.A.M.C.
Brogden, I. R. R. ...	Temp. Lieut.	R.A.M.C. (Believed drowned, 15th April, 1917.)
Bromley, L.... ...	Temp. Capt....	R.A.M.C.
Broome, F. C. S. ...	Surg.... ...	R.N.
Brown, T. F. ...	Major ...	R.A.M.C. D.S.O.
Browne, E. G. ...	Col.	A.M.S., Headquarters' Staff. C.B. Mentioned in despatches.
Burner, L. H. ...	Temp. Lieut.	R.A.M.C.
Burridge, W. ...	Lieut. ...	R.A.M.C.
Bush, W. H. ...	Temp. Lieut.	R.A.M.C.
Campion, O. St. L...	Temp. Lieut.	R.A.M.C.
Cardin, H.	Temp. Lieut.	R.A.M.C.
Chevreau, P. R. ...	Temp. Lieut.	R.A.M.C.
Chisholm, R. A. ...	Tp.Hon. Lieut.	R.A.M.C. No. 8 British Red Cross Hosp.
Clark, J. Kenneth ...	Capt.... ...	Australian Infantry. (Twice wounded.)
Clark, R. F.... ...	Fleet Surg. ...	R.N. H.M.S. "Vivid."
Collins, J. E. E. ...	Temp. Lieut.	R.A.M.C.
Collins, R. T. ...	Temp. Lt.-Col.	R.A.M.C. In charge Field Ambulance.
Cooke, Oswald H. ...	2nd Lieut. ...	King's Own Yorkshire Light Infantry.
Cooper, J. S. ...	Capt.... ...	R.A.M.C., T.F.
Coplans, M.... ...	Capt.... ...	R.A.M.C., T.F. D.S.O. Chevalier de l'Ordre de Léopold (Belgian). Thrice mentioned in despatches.
Corry-Mann, H. ...	Surg.... ...	R.N. R.N. Hosp., Malta.
Croucher, H. V. ...	Pte.	2nd Batt. Artists' Rifles.

Davies, K. J. H. ...	Surg. Prob. ...	R.N.V.R.
Davy, H.	Col.	R.A.M.C., T.F. C.B., 1917.
Daw, H.	Temp. Capt....	R.A.M.C.
Day, W. L. M. ...	Lieut. ...	R.A.M.C.
Densham, A. ...	Temp. Capt....	R.A.M.C.
Dingley, W.... ...		Killed in action, 1917.
Dobson, M. R. ...	Temp. Lieut.	R.A.M.C.
Doubleday, F. N. ...		Dental Surgeon to King George Military Hosp.
Douglas, Claude G....	Capt.... ...	R.A.M.C. Military Cross. Twice mentioned in despatches.
Douse, J. F.... ...	Temp. Lieut.	R.A.M.C.
Drake, G. H. ...	Temp. Lieut.	R.A.M.C. Royal Garrison Artillery.
Duke, B.	Capt.... ...	15th Batt. City of London V.R. and Medical Officer.
Dyke, Victor R. ...	Lieut. ...	R.A.M.C.
Eccles, G. D. ...	Capt.... ...	R.A.M.C. Mentioned in despatches, 1917.
Evans, C. R. ...	Lt.-Col. ...	R.A.M.C. D.S.O. Mentioned in despatches, 1917.
Evans, H. W. ...	Capt.... ...	R.A.M.C., S.R. Military Cross, 1917.
Evans, J.	Mjr. (T. L. Col.)	R.A.M.C. Mentioned in despatches, 1917.
Ewing, A. W. ...	Temp. Lieut.	R.A.M.C.
Fothergill, E. R. ...	Temp. Capt....	R.A.M.C. Mentioned for war services.
Fraser, A.	Temp. Lieut.	R.A.M.C.
Fraser, J. H. ...		Medical Officer 3/2 East Anglian R.F.A. In charge Military Auxiliary Hosp., Eastern Command.
Fuller, F. Holcombe	Temp. Lieut.	R.A.M.C. Military Hosp., Devonport.
Gardiner, Ivan J. ...		Killed in action, 1917.
Gardner, A. L. ...	Temp. Lieut.	R.A.M.C.
Gathergood, L. S. ...	Lieut. ...	R.A.M.C., S.R.
Gatley, C. A. R. ...	Temp. Capt....	R.A.M.C. Attached "Buffs." (Wounded, 1917.)
George, W.	Capt.... ...	R.A.M.C. Military Cross, 1917.
George, W. S. ...	Temp. Lieut.	R.A.M.C.
German, H. B. ...	Temp. Capt....	R.A.M.C. Leicester Regt. (Wounded.) Mentioned in despatches, 1917.
Gibson, F. G. ...	Major ...	N.Z.M.C. H.M. Hosp. S. "Maheno."
Gill, L.	Temp. Lieut.	R.A.M.C.
Greene, J. A. C. ...	Temp. Lieut.	R.A.M.C.
Greene, W. R. ...	Temp. Major	R.A.M.C., Dental.
Grellet, H. R. ...	Temp. Lieut.	R.A.M.C. Yorks. and Lancs. Regt. Wounded, 1917.
Holden, R. J. G. ...	Pte.	Artists' Rifles.
Hancock, A. C. ...	Temp. Capt....	R.A.M.C. Mentioned in despatches. Military Cross, 1916, and Bar, 1917.
Hardy, G. F. ...	Temp. Capt....	R.A.M.C. Mentioned in despatches, 1917. (Wounded.)
Harper, J.	Temp. Lieut.	R.A.M.C.
Harrison, S. S. B....	Capt.... ...	R.A.M.C., T.F. S. Staffs Regt. Military Cross, 1917.
Heath, F. R. H. ...	Temp. Lieut.	R.A.M.C.
Heath, T. L. ...	Temp. Lieut.	R.A.M.C.
Helsham, C. T. ...	Surg. Prob. ...	R.N.V.R. D.S.C., 1917.
Henderson, H. J. ...	Temp. Lieut.	R.A.M.C.
Hewetson, H. ...	L.Col. (Tp.Col.)	R.A.M.C. Mentioned in despatches, 1917.
Hind, W.	Tp. Lt.-Col.	R.A.M.C. Mentioned for war services, 1917.

Hodgson, C. R. ...	Capt.... ...	Australian A.M.C.
Howe, A. F. A. ...	Capt.... ...	R.A.M.C., Dental.
Howell, J. B. ...	Temp. Lieut.	R.A.M.C.
Howells, J.	Temp. Lieut.	R.A.M.C.
Hugill, Valentine F. H.	2nd Lieut. ...	Royal Fusiliers. Despatch rider attached Royal Engineers. (Killed in action, 16th October, 1916.)
Hull, A. J.	Tp. Lt.-Col.	R.A.M.C. Twice mentioned in despatches.
Hunter, P. D. ...	Temp. Lieut.	R.A.M.C.
Jackson, F. D. S. ...	Temp. Major	R.A.M.C.
Jackson, R. W. P....	Capt.... ...	R.A.M.C. Croix de Guerre, 1917.
John, D. W. ...	Capt.... ...	R.A.M.C., S.R. Twice mentioned in despatches.
Johnstone, J. L. ...	Temp. Lieut.	R.A.M.C.
Joint, M. C. ...	Lieut. ...	R.A.M.C., S.R.
Jones G. H.... ...	Temp. Lieut.	R.A.M.C.
Jones, R. O. H. ...	Temp. Capt....	R.A.M.C. (Wounded.)
Kennedy, R. S. ...	Temp. Capt....	I.M.S. Military Cross, 1917.
Knaggs, F. H. ...	Temp. Capt....	R.A.M.C. (Died, 1917.)
Knight, R. V. ...	Flight Sub.-Lt.	R.N. (Accidentally killed, 12th March, 1917.)
Knights-Rayson, J. T.	Capt.... ...	S.A.M.C. 1st Military Hosp., Wynberg Camp, S.A.
Knott, F. A. ...	Temp. Surg....	R.N.
Knox-Davies, E. A. C.	Capt.	S.A.M.C.
Lane, Sir W. A., Bt.	Tp. Lt.-Col.	R.A.M.C. C.B., 1917.
Larkin, R.	Temp. Lieut.	R.A.M.C.
Leigh, H. V. ...	Temp. Capt....	R.A.M.C. Mentioned in despatches, 1917.
Lidderdale, J. F. ...	Temp. Capt....	R.A.M.C. Mentioned in despatches, 1917.
Lindsay, G. P. ...	Lieut. ...	2nd Border Regt. (Twice wounded.) Military Cross.
Littlejohns, A. S. ...	Temp. Major (Act. Lt.-Col.)	R.A.M.C. D.S.O., 1917. Mentioned in despatches.
Lobb, E. L. M. ...	Temp. Lieut.	R.A.M.C.
Longson, F. M. ...	Temp. Lieut.	R.A.M.C.
McAllan, W. J. ...	Surg. Prob. ...	R.N. H.M.S. "Abdiel."
Mackenzie, Murdo ...	2nd Lieut. ...	3/1st Surrey Yeomanry.
Magrath, C. W. S....	Lt.-Col. ...	R.A.M.C. Mentioned for war services.
Maile, W. C. D. ...	Capt.... ...	R.A.M.C., T.F.
Marshall, B. G. ...	2nd Lieut. ...	3rd Northants. (Killed in action at Loos.)
Marshall, Claude H.	Capt.... ...	Uganda F.A. In charge Medical (British), attached Belgian Troops in Uganda.
Marshall, E. S. ...	Temp. Capt....	A.M.S., Headquarters' Staff. Twice mentioned in despatches.
Marshall, W. L. ...	Tp. Lt.-Col. ...	R.A.M.C. Mentioned for war services.
Marston, A. D. ...	Temp. Surg....	R.N.
Martin, J. Birch ...	Lieut. ...	R.A.M.C. 44th Gen. Hosp., Mesopotamia.
Maxwell, J. E. ...	Sub.-Lt. ...	R.N.V.R. R.N. Air Service. (Killed in Bulgaria, 30th March, 1917.)
Maynard, E. F. ...	Lt.-Col. ...	R.A.M.C. Mentioned for war services.
Micklem, T. E. ...	Temp. Lieut.	R.A.M.C. Mesopotamia.
Miller, W. H. ...	Temp. Lieut.	R.A.M.C.
Mitchell, H. V. ...	Temp. Lieut.	R.A.M.C.
Moffatt, H. A. ...	Lt.-Col. ...	S.A.M.C. D.S.O., 1917.

Morgan, E.		
Morris, G. H. ...	Temp. Lieut.	R.A.M.C.
Moyle, H. H. ...	Temp. Lieut.	R.A.M.C.
Muir-Smith, H. ...	Capt.... ...	1/7th Middlesex.
Murphy, Sir Shirley	Lt.-Col. ...	R.A.M.C. Mentioned for war services.
Murray, C. M. ...	Temp. Major	S.A.M.C. Mentioned in despatches, 1917.
Nelson, K. M. ...	Temp. Capt....	R.A.M.C. Mentioned in despatches, 1917.
Nutman, B. K. ...	Temp. Lieut.	R.A.M.C.
Paget, Peter... ...	Major ...	R.A.M.C., T.F. Territorial decoration.
Palmer, A. H. ...	Surg.-Major...	R.A.M.C., T.F. (Died of wounds at Cairo, 17th April, 1917.)
Palmer, A. S. Morton	Temp. Lieut....	R.A.M.C.
Parry-Jones, O. G....	Capt.... ...	R.A.M.C., S.R. Mentioned in despatches. (Died of wounds.)
Payne, O. V. ...	Temp. Lieut.	R.A.M.C.
Pearson, M.... ...	Temp. Surg....	R.N.
Penny, E. A. ...	Capt.... ...	I.M.S. M.O. 14th Lancers, Indian Army.
Pilcher, E. M. ...	L.Col.(Tp.Col.)	R.A.M.C. D.S.O. Mentioned for war services.
Plumptre, C. M. ...	Capt.... ...	I.M.S.
Pocock, T. C. ...	Temp. Lieut.	R.A.M.C.
Pollock, C. E. ...	Lt.-Col. ...	A.M.S. Headquarters' Staff. Twice mentioned in despatches, 1917.
Powell, J. E. ...	Tp. Lt.-Col.	R.A.M.C. D.S.O., 1917. Mentioned in despatches.
Pritchett, H. N. ...	Temp. Lieut.	R.A.M.C.
Purkiss, K. N. ...	Capt.... ...	R.A.M.C. 20th Combined F.A., I.E.F.
Rankine, J. L. ...	Temp. Lieut.	R.A.M.C.
Rashleigh, H. G. ...	Temp. Lieut.	R.A.M.C.
Rayner, A. E. ...	Capt.... ...	R.A.M.C., T.F. Mentioned in despatches, 1917.
Reckitt, Chas. E. ...	Temp. Surg....	R.N. (Died at Haslar Hospital, 20th January, 1917.)
Richards, Ernest H.	2nd Lieut. ...	21st Manchesters. (Killed in action at Croisilles, 2nd April, 1917.)
Richardson, Q. H. ...	Staff Surg. ...	R.N.
Roberts, R.	Temp. Lieut.	R.A.M.C.
Robertson, G. S. ...	Temp. Lieut.	R.A.M.C.
Robertson, J. F. ...	Capt.... ...	R.A.M.C. Mentioned in despatches.
Robinson, G. C. ...	Lieut. ...	R.A.M.C.
Ryffel, J. H. ...	Lt. (Tp. Capt.)	R.A.M.C., T.F.
Ryley, C. M. ...	Temp. Surg....	R.N.
Salvage, J. V. ...	Lt.-Col. ...	R.A.M.C. Mentioned for war services.
Samut, R. P. ...	Tp. Lt.-Col.	R.A.M.C. K.O. Malta Regt. of Militia. Mentioned for war services.
Sandoe, W. A. ...	2nd Lieut. ...	9th Devons. (Died of wounds, 1917.)
Saul, E. R.	Temp. Lieut....	R.A.M.C., Dental. Advisory Dental Officer, Bedford Dist.
Saunders, S. McK....	Capt.... ...	R.A.M.C. Mentioned in despatches, 1917. Soudan.
Scott, E. D.... ...	Temp. Surg....	R.N.
Searle, Chas. F. ...	Capt.... ...	R.A.M.C., T.F. Military Cross, 1917. (Wounded.)
Sharp, N. A. Dyce...	Temp. Lieut.	M.C. attached Nigerian Regt. Received thanks of H.M. Government.
Sharpley, T. S. ...	Temp. Lieut.	R.A.M.C.

Shaw, T. A. ...		
Sheaf, E. W. ...	Temp. Lieut.	R.A.M.C.
Smith, A. H. ...	Capt.... ...	R.A.M.C. (Wounded.)
Snell, Herbert ...	2nd Lieut. ...	Lancs. Fusiliers. (Killed in action, 9th April, 1917.)
Spicer, A. H. ...	Capt.... ...	R.A.M.C. Mentioned in despatches, 1917.
Spon, H. J. ...	Medical Officer to Lady Violet Brassey's Hospital for Officers.	
Spong, R. A. ...	Lieut. ...	Middlesex Hussars, attached 6th.
Stainer, Claude H....	Lieut. ...	Loyal North Lancs. (Killed in action in France, 15th November, 1916.)
Steele-Perkins, D. ...	Temp. Capt....	R.A.M.C.
Stephens, H. F. ...	Temp. Lieut.	R.A.M.C.
Stephenson, J. ...	Capt.... ...	R.A.M.C. Mentioned in despatches, 1917.
Sterne-Hewitt, H. ...	Capt.... ...	S.A.M.C. South African Military Hosp., Richmond, Surrey.
Stewart, J. L. ...	Temp. Capt....	R.A.M.C. Military Cross. Mentioned in despatches. (Wounded.)
Stott, H.	Major ...	I.M.S. Mentioned for war services.
Stout, T. D. M. ...	Temp. Major	N.Z.M.C. D.S.O., 1917. Mentioned in despatches.
Stuart, H. Douglas...	Major (Tp. Lt.-Col.)	R.A.M.C. Twice mentioned in despatches, D.S.O., 1917.
Stuart, W. L. ...	Temp. Lieut.	R.A.M.C.
Sutton, Alfred ...	Col.	A.A.M.C. 2nd Australian Divn. A.D.M.S. C.M.G.
Swan, R. H. Jocelyn	Temp. Major	R.A.M.C. Mentioned in despatches, 1917.
Tanner, W. E. ...	Lieut. ...	R.A.M.C.
Thomson, G. ...	Capt.... ...	R.A.M.C., T.F. (Wounded, 1917.)
Ticehurst, C. B. ...	Temp. Lieut.	R.A.M.C.
Todd, A. H.	Surg.	King George Hospital, Lewisham Military Hosp., and Bromley V.A.D. Hospital.
Traill, R. R. ...	Lieut. ...	R.A.M.C. I.E.F., Mesopotamia.
Turner, W. A. ...	Surg. Prob. ...	R.N.V.R. Order of St. Stanislas, 3rd Class, by the Russian Government, 1917.
Turner, W. H. ...	Lieut. ...	R.F.A.
Vertue, H. St. H. ...	Lieut. ...	R.A.M.C., S.R.
Vidot, S.	Temp. Lieut.	R.A.M.C.
Wacher, G.	Temp. Lieut.	R.A.M.C.
Wacher, H. S. ...	Temp. Lieut.	I.M.S.
Walker, H.	Temp. Capt....	R.A.M.C. Mentioned in despatches, 1917.
Wallis, A. E. W. ...	Temp. Lieut.	R.A.M.C.
Walters, W. J. ...	Temp. Lieut.	R.A.M.C.
Ward, F.	Capt.... ...	R.A.M.C., T.F.
Weinberg, A. ...	Pte.	S.A.M.C. South African Gen. Hosp., France.
Wetherell, M. C. ...	Tp. Lt.-Col.	R.A.M.C.
Wilcocks, A. J. ...	Lieut.-Col. ...	I.M.S. Mentioned in despatches, 1917.
Williams, A. D. J. B.	Cpt.(Tp.Maj.)	R.A.M.C., T.F. Mentioned in despatches, 1917.
Wilson, T. F. ...	Temp. Capt....	R.A.M.C.
Winter, T. B. ...	Lt.-Col. ...	R.A.M.C. Mentioned for war services.
Wood, C. D.... ...	Army Dental Surgeon.	
Wood, J. A. ...	Temp. Lieut.	R.A.M.C.
Wragg, E.	Temp. Lieut.	R.A.M.C.
Wright, C. S. E. ...	Temp. Capt....	R.A.M.C. Mentioned in despatches, 1917.
Wright, J. A. S. ...	Prob. Flight Officer, R.N.A.S.	
Wright, T. J. ...	Tp. Lt.-Col.	R.A.M.C. D.S.O., 1917. Mentioned in despatches.

Pass List.

University of Oxford.

M.B., B.Ch.

At the Final Examination held recently J. J. Conybeare was successful.

Pathology.—H. G. Burford.

University of Cambridge.

SECOND EXAMINATION.

W. R. Carling was approved in Pharmacology and General Pathology.

University of London.

The following candidates were successful at the undermentioned recent examinations:—

M.D. EXAMINATION—BRANCH I. (MEDICINE).

D. J. Munro, B.S.

SECOND EXAMINATION FOR MEDICAL DEGREES (PART II.)

H. T. Le Vieux and S. Cohen.

Royal Colleges of Physicians of London and Surgeons of England.

At the Second Professional Examination in Anatomy and Physiology, held on June 28th and 29th and July 2nd and 3rd, the following candidates were successful:—H. T. Le Vieux, J. G. Barrie, D. J. O'Meara, V. Wadsworth.

At the Quarterly Examination in Practical Pharmacy the following candidates were approved:—H. N. Schapiro, C. G. Coombs, M. Sidky, E. de V. Van der Merwe.

FINAL EXAMINATION.

At the last Examination the following candidates were approved in the undermentioned subjects:—

Medicine.—F. T. Harrington, K. N. Craig, S. M. M. Jabir,* H. J. Leviseur, J. R. Cox, E. H. Bryant,* C. H. Laver,* H. H. Khan,* W. B. Buer,* E. C. Hinde, A. B. Cocker,* N. Kamchorn, C. G. Coombs, A. Bulleid, J. Kyle, J. C. Gie, R. J. Hearn.

Surgery.—S. M. M. Jabir,* E. H. Bryant*, C. H. Laver,* H. H. Khan,* F. Caldecott, L. S. Debenham, H. W. Eddison,* J. W. H. Grice,* S. Riddiough,* H. D. Apergis,* J. Victory.*

Midwifery.—K. N. Craig, S. M. M. Jabir, J. R. Cox H. H. Khan,* F. Caldecott, H. O. Long, W. A. Flynn, G. A. S. Shacklock, A. L. S. Payne, W. H. Grace, W. Gover, R. T. F. D. Roberts, N. H. S. Maelzer,* H. Johnson, A. G. M. Severn, W. A. Hawes, R. C. W. Staley, A. R. Doyle, T. Fernandez, S. Riddiough.*

*Have completed the examination.

Society of Apothecaries of London.

At the Final Examination held this month the following candidates were approved in the undermentioned subjects:—

Surgery.—B. Ramirez (Section II.).

Forensic Medicine.—A. Magill.

The Diploma of the Society was granted to B. Ramirez, entitling him to practise in Medicine, Surgery and Midwifery.

Papers by Guy's Men.

F. N. Doubleday, L.R.C.P., M.R.C.S., L.D.S. Eng.: Pyorrhœa alveolaris in its relation to general medicine.—*Brit. Dent. Journ.*, June 15th, 1917.

Hildred Carlill, M.A., M.D. Cantab., M.R.C.P.: A note on the association of herpes zoster with arsenic.—*Brit. Med. Journ.*, July 7th, 1917.

J. A. B. Hammond, M.B. Lond. (in collaboration with William Rolland, M.D. Glas., and T. H. G. Shore. M.D. Cantab., M.R.C.P. Lond.): Purulent bronchitis.—*The Lancet*, July 14th, 1917.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Anæsthetics. By J. Blomfield. (Ballière, Tindall & Cox.) Fourth edition. Price 4s. net.

Students desirous of obtaining an elementary knowledge of anæsthetics will welcome a new edition of this well-known and popular little text-book. The general principles and technique of anæsthesia are dealt with clearly and concisely, the chapter on choice of anæsthetic being particularly good. The present edition does not appear to differ markedly from previous editions, but it contains a short chapter on anæsthetics in military practice.

Tuberculosis. By Clive Riviere, M.D., F.R.C.P. (Methuen's Health Series.) Fcap. 8vo. 1s. net.

This little volume is a pamphlet designed presumably as a tract for use in what the daily papers term the Consumption Crusade. It contains an admirably clea

and very simple account of the etiology and symptoms of tuberculosis as it affects all ages, together with chapters on preventative measures and treatment. It should be very useful to elementary school teachers, district nurses, and others who, without any profound medical knowledge, are called upon to do such important work in preaching the gospel of self-preservation by common-sense hygiene.

Physical Remedies for Disabled Soldiers. By R. Fortescue Fox, M.D. (Published by Bailliere, Tindall & Cox, 8, Henrietta Street, Covent Garden, 1). Price 7s. 6d.

Now owing to the many and various conditions which have arisen through this war Dr. Fortescue Fox's new book should prove of great assistance to all people concerned in the after treatment of wounded soldiers. The book is clearly arranged into three parts. Part I.—Hydrological Remedies and the indications for their uses. All the new and old baths being very thoroughly but briefly discussed. Part II.—Mechanical and Electrical Remedies with chapters by Major Tait McKenzie, Dr. James B. Mennell, M,A.,M.D.,B.C. Cantab, etc.. on the administration of massage, and Frances Hernaman Johnson, M.D., on electricity and radialism. The illustrations of the modified and simple apparatus installed in the Red Cross Clinics, designed in France for military cases, show clearly their great advantage over the rather complicated Zander apparatus of pre-war times. Part III, –The Provision for Physical Remedies describes the fitting up of departments to carry on the treatment for disabled soldiers. Chapters xv. & xvi. deal entirely with the British Spas and Climates suitable to many conditions. This book is written in a clear and concise manner, well illustrated, and should be found very useful.

Catechism Series—Surgery, parts iii. & iv.; *Pathology*, parts ii. & iii.; *Materia Medica*, part iii. Published by E. & S. Livingstone, Edinburgh. Price 1s. 3d. nett per part.

These little books are too well known to students to need much comment. We notice that in the above numbers the text is illustrated by a number of figures. Though the Catechism series is one which we feel very few read for pleasure, they often prove themselves useful in the intensive "cramming" sometimes undertaken before an examination.

Malingering: or the Simulation of Disease. By A. Bassett Jones, and Ll. Jones Llewellyn. With a Chapter on Malingering in Relation to the Eye, by W. H. Beaumont. (Published by Wm. Heinemann, Ltd., London). Price 25s. net.

The detection and diagnosis of malingering has in recent years become one of very great interest and importance to the medical profession, owing to the war and the question of malingerers among soldiers, and also in connection with the working of the Insurance Act. This book, of some 700 pages, deals with the subject exhaustively from every point of view.

The authors point out quite rightly that to bring a charge of malingering against a patient is a very serious responsibility, and the chapter on the "Diagnosis of Malingering" adduces many examples of cases where a too hasty diagnosis, based on an imperfect physical examination, has been proved to be wrong, with disastrous results both to the patient and the expert. Great stress is laid on the fact that a diagnosis of malingering should never be made simply on the fact that a patient presents no obvious physical signs of disease. To do this is to overlook the large number of functional diseases or neuroses, which have come so much to the fore in recent years.

The book is arranged in five sections. The first consists of general considerations such as the influence of legislation, especially the Insurance Act, the classification of malingering and its diagnosis, together with the methods of investigation which may be used in a suspected case. Section II. is on malingering in relation to the Nervous System, Section III. on malingering in relation to Internal Diseases, Section IV. in relation to Injuries and External Diseases. The last Section deals with the question of measures for the restriction of malingering.

The opinion is expressed that malingering is no more common among soldiers than among civilians. This may be true as far as pure malingering with no basis of injury or disease is concerned. It is, however, obvious that to the soldier illness means comparative luxury and safety, and there is therefore no stimulus to early recovery. In consequence soldiers are certainly very prone to exaggerate their diseases or wounds. This may even be done subconsciously leading to traumatic neuroses and other well defined functional disorders. It is in such cases as the latter that the greatest difficulties are experienced in diagnosis.

The book is well printed and has a number of excellent reproductions of photographs. It may be confidently recommended to all medical men, especially those who through the army or the Insurance Act are likely to be faced by cases which involve the question of malingering.

Births.

SWAN.—On July 6th, at Wimpole Street, W., the wife of R. H. Jocelyn Swan, M.S. Lond., F.R.C.S., Major R.A.M.C., of a daughter.

PEACOCK.—On July 12th, at Pemberton Nursing Home, London, the wife of H. M. Peacock, L.D.S., of Epsom, of a daughter.

J. J. C.

GUY'S HOSPITAL GAZETTE.

VOL. XXXI., No. 759.] AUGUST 11, 1917. [SIXPENCE.

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Three Years of War and the Army Medical Service.

IN any criticisms of the Army Medical Service, which the experience of three years of war may suggest, it must not be forgotten that never before has any organisation had to deal with the health of such vast numbers of men or so many separate expeditions scattered all over the world. But if great difficulties have had to be met and have been dealt with more or less successfully, it is still the duty of everyone concerned to review the failures in order to attempt to avoid them in the future. Great errors involving thousands of lives and vast expenditure of wealth have been made by every department which has been concerned in the conduct of the war, and it is difficult at present to assert that the Army Medical Service has made fewer mistakes than any other branch of the service. Yet the Army Medical Service is apparently more complacent and self congratulatory than others who have made mistakes. From time to time during the last three years official and semi-official "puffs" of the A.M.S. have appeared in the lay press, and the more senior officers in that service have been loaded with honours and decorations. The reverse side of the picture is less often looked on, and it is only within the last year that the tales of horror from Mesopotamia, the cruelty and incompetence of many recruiting boards, and sinister rumours about the forthcoming Dardanelles report have brought to general notice the fact that great though the difficulties may have been, the A.M.S. has not been so successful in combating them as the inspired eulogies of the medical arrangements in the various theatres of war might have led the public to expect.

It must be clearly understood that any criticisms on the Army Medical Service are directed against the higher administrative authorities and not against the great mass of R.A.M.C. officers who are, of course, really civilians, and whose work is recognised by all to have been carried out with the utmost bravery, kindness, and devotion to duty.

In any review of the work of the Army Medical Service it is essential to consider the various theatres of war separately. Conditions have varied so enormously that results which might be considered a great success in one theatre would be a ludicrous failure in another. Let us first consider the medical arrangements on the Western Front. It is here that the least adverse criticism has been heard and that the fewest scandals have been exposed. Needless to say during the first few months of war the

A.M.S. proved quite inadequate to deal with the sudden demands made upon it, but for this the authorities can hardly be held seriously to blame. Since then it cannot be denied that the treatment of sick and wounded in France has been, on the whole, extremely successful. The Surgeon-Generals and other Regular Officers holding high administrative posts in the A.M.S. have not hesitated to congratulate themselves on this success, yet we doubt if it is so much due to their own efforts as the result of the admixture of civilian talent. The leaders of the profession who have acted temporarily as consulting physicians and surgeons have done much to render treatment effective, while their efforts have been ably seconded by the thousands of civilians who have been called into the ranks of the R.A.M.C. How far the success which has been attained is in spite of rather than by reason of the A.M.S. administration we shall probably never know.

Yet criticisms have been levelled even against the A.M.S. administration on the Western Front. There can be no doubt that if the system is effective it is also wasteful of medical personel. The civil population has been deprived of medical attention to supply the army, and there is plenty of evidence that many practitioners have been dragged away from their homes and practices to languish doing the work that an Assistant Surgeon's Dresser at Guy's would be wasting his time in doing. It is only too common to meet men who have done two years in the R.A.M.C. who say that they have never done a real day's work since they joined the army. Again, it is not always clear that the A.M.S. makes the best use of the material that is available. Distinguished surgeons working twelve hours a day among soldiers and civilians at home have been hustled off to base hospitals in France, which they have found on arrival to exist only in name or number. Brilliant junior consulting surgeons have found themselves doing the work of a mere House Surgeon. Nor has the treatment of patients always been ideal. Before now men who have been at Rest Stations in France for slight illnesses or wounds have declared they would rather die than again visit a Rest Station.

But when we turn from France to campaigns in distant countries there can be no question as to the complete failure of the medical arrangements. The Mesopotamia report shows only too clearly that the administrative medical authorities involved can only be considered as callous, incompetent, and tyrannous. The report makes it quite clear that Surgeon-General Hathaway knew only too well of the appalling conditions after Ctesiphon and later, conditions due mainly to his own lack of foresight and incompetence, and yet his efforts were directed not to effect any remedy or to avoid a repetition of the disasters, but in attempts to conceal the facts from an indignant public. How successful he was in the latter aim is clearly demonstrated by the fact that the complete breakdown of medical arrangements was not dragged to light for well over a year. But the Mesopotamia report is available to anyone who chooses to read it, and there is no need to go into the horrors which it exposes. It is only necessary to point out that responsibility rests not with General Hathaway alone, but with his superiors.

The full story of the Dardanelles has not yet been divulged, but it is common knowledge that the expedition from the point of view of the health of the troops was disastrous. How far this disaster was avoidable cannot yet be determined, but we shall be surprised if the reputations of some of the highest A.M.S. authorities remain unscathed when the report is issued.

If we turn to medical arrangements in India, there is also little ground for congratulation. Sir Alfred Keogh who might be expected to

take as optimistic a view as possible, made the following statement to the Mesopotamia Commission :—

"I have no hesitation in saying that the medical arrangements connected with the army in India have been for years and years most disgraceful. . . . . Anything more disgraceful than the carelessness and want of attention with regard to the sick soldier in India it is impossible to imagine."

The evidence given before the Commission amply bears out Sir Alfred Keogh's statement. Even in a civilised city such as Bombay the hospital accommodation was shown to be inadequate and lamentably deficient in such important details as electric fans and X-ray apparatus.

Neither in its dealings with the general public in its supervision of the recruiting medical boards, nor in its treatment of the profession itself, has the Army Medical Service much to boast of. The Select Committee which is at present sitting to inquire into the conduct of recruiting medical boards has already brought to light a vast amount of needless suffering and loss inflicted on the public. This has been shown to be due not so much to the members of the boards who are civilians, but to the military presidents, who have acted in many cases with the utmost callousness and disregard both of army and civilian requirements. So strong has feeling been on the recruiting question that Lord Derby has been compelled to transfer the whole question of recruiting and medical examination from military to civilian hands.

The medical profesion itself has little reason to be satisfied with the conduct of the Army Medical authorities. In spite of all the willing sacrifices, both personal and pecuniary, which have been made by members of the profession since the outbreak of war, the War Office, with characteristic insolence threw over all their agreements with the Central Medical War Committee and the Committee of Reference and called up all medical men under 41 for service with the colours. Such a step, besides causing great hardship to those directly involved, would have left many large industrial towns without a single medical man. Needless to say, a bully is always a coward, and when the authorities were faced by the representatives of the profession they climbed down ignominiously.

Again, the scandal of the payments to civilian practitioners working at Voluntary Aid Hospitals has been exposed by Dr. Howard Marshall. Nothing more dishonest or discreditable has been ever brought to light in the history of a public department than the way in which the medical authorities at the War Office endeavoured to exploit the services of medical men.

It is always easy to find faults, but more difficult to suggest remedies. Why is it that the administration of the A.M.S. has shown so many deplorable shortcomings? The answer is not difficult to find. Practically the whole power is centralised in one man, and in a man who at a public dinner said that his job was to look after the military and that he cared nothing for the civilian population. Sir Alfred Keogh is practically a dictator to the whole medical profession and might be expected to take a broader view of his responsibilities than this. As Director General he and his subordinates have shown a fine contempt for the advice and opinions of the leaders of the medical profession. Why was it that a Royal Commission established the Advisory Board to assist the Director General? Obviously because it was realised that in the administration of the Royal Army Medical Corps the best results could not be obtained without the assistance and advice of the medical profession. Yet, since the war began, we believe we are right in saying that the Advisory Board has never once met nor been consulted in any way. A systematic at-

tempt has been made to muzzle criticism and suggestions from any outside the select few officials who have risen to their high position by length of service alone. The whole spirit of the Army Medical Service is well exemplified in their treatment of Major Carter when he made a report on the avoidable horrors after Ctesiphon. "I threatened to put him under arrest," admitted General Cowper to the Mesopotamia Commission, "and I said that I would get his hospital ship taken away from him for a meddlesome interfering faddist." How many other Major Carters there have been, who have been "broken" for speaking out and not falling in with the A.M.S. system of repressing the unpleasant we shall never know. All that can be hoped for is that by radical changes in the higher control of the medical administration the scandals that have occurred may be avoided in future, and that the profession may be utilised in such a way as to obtain the greatest efficiency both for soldier and civilian.

Change of Address.

Capt. D. H. A. Galbraith, R.A.M.C., No. 110 Combined Field Ambulance, 3rd Div., I.E.F.D.

Capt. J. Gaymour Jones, R.A.M.C. from 8th British Field Ambulance to 4th Brigade, R.F.A. Mesopotamia Expeditionary Force.

Capt. R. C. Mullins, S.A.M.C., No. 1, S.A. General Hospital, B.E.F.

J. H. Roberts, B.A., from 70, St. Barnabas Road to 1, Mortimer Road, Cambridge.

Surg. E. S. Bowes, R.N., H.M.S. *Cornwall* c/o Admiralty, S.W.

Papers by Guy's Men.

A. Neville Cox, M.D.Lond,, M.R.C.P.Lond.: The drainage of an infected hæmothorax —*The Lancet*, Aug. 4th, 1917.

C. Doswell Wallace, L.D.S., R.C.S., M.I.H.: The relation between teeth and disease showing the influences of the condition of the mouth on general health and nutrition.—*The Dental Record*, August 1st, 1917.

Passim.

WE have much pleasure in congratulating Captain A. C. Hancock on being awarded a second bar to the Military Cross. He is certainly the only Guy's man—in fact, probably the only medical man—who has thrice won the Military Cross. His original M.C. was gazetted on December 11th, 1916, and the first bar on February 15th, 1917.

THE military authorities have now decided quite definitely that the fact that a man is a fourth or fifth year student does not necessarily make him exempt from being called up. Any exemption granted is conditional on his obtaining a certificate from the Medical School that he is carrying on his work here satisfactorily. The recruiting authorities are also beginning to take an interest in the probable date at which a student will qualify. Though at present there is no suggestion of any time limit being fixed, we shall not be surprised if something of the kind is not ultimately instituted.

THE unpleasantness of the weather during the past fortnight has perhaps had the advantage of rendering us less liable to air raids. We fear, however, that daylight aeroplane raids have come to stay, and as the belligerents increase their air-services, which they are all doing as fast as possible, we shall have to expect more frequent and formidable raids. In another column we print a notice respecting air-raid warnings between 6.30 a.m. and 5 p.m.

Miss L. V. Haughton.

Miss Haughton's many friends will be glad to hear that her health is steadily improving and she is thoroughly enjoying the beautiful country and fine views of Surrey Hills where she has been staying for some weeks.

Last week Mrs. Cosmo Bonsor, as President of Guy's Hospital Past and Present Nurses' League, sent to Miss Haughton a letter asking her acceptance of the cheque enclosed as a declaration of the affection and esteem with which she is regarded with gratitude for her services to the Hospital and the Nursing Profession, and with deep regret at her serious and untimely illness. A simply bound manuscript book held a list of more than 700 names, and these had been written as a labour of love in the Matron's Office.

The frontispiece set forth that the signatures included present Sisters and Hospital and Institution Nurses, Administrative Staff, Past and Present League Members, friends interested in the Nurses' League, members of the Staff, and others who have met Miss Haughton while Matron of the Hospital and enjoyed the privilege of her friendship, interest, or advice.

Mrs. Cosmo Bonsor has received from Miss Haughton a most appreciative letter of thanks speaking of the honour in which she held her position as Matron and the solace that she has derived, during her illness and severance from the work she loved, from the devotion and remembrance of her friends.

Roll of Honour.

Wounded.

Capt. H. D. Smart, M.C., R.A.M.C., attached to Lincolnshire Regiment.

Capt. G. D. Eccles. R.A.M.C.

Capt. J. B. Milne, M.C., R.A.M.C., attached to the Royal Field Artillery, previously reported wounded is now reported not wounded.

Air Raid Warnings.

IN future, between the hours of 6 30 a.m. and 5 p.m., notice that an aeroplane raid is expected will be given by means of *three prolonged blasts* upon the steam whistle in the Works Department. This will be in addition to the usual telephone message from the Porter's Lodge, and to the police system of warnings by means of placards and rockets.

The fire door, connecting corresponding wards, will be kept unlocked from the time of warning until the "All Clear" notice is received.

N.B.—The whistle is blown normally (one prolonged blast) at 6.30 a.m., 8 a.m., 8.30 a.m., noon, 1 p.m., and 5 p.m. every day.

(Signed) A. H. TODD,
Acting Superintendent.

Guy's Hospital, S.E.
July 30th, 1917.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

[We would point out that we cannot *in any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—ED., G.H.G.]

DEAR SIR,—I was very interested to read the article of your correspondent, W. Bulleid, in the last issue of the GAZETTE. Most of what he says is quite correct, but there is just one point, to my mind, which we ought to be grateful to the army authorities for: that is, that they have made the correct distinction between the qualified and unqualified. To them a man is either a dental surgeon or a dental mechanic, and only the dental surgeon is given a commission and allowed to practice as such.

The unqualified are only allowed to work as dental mechanics. Although a number of them have tried hard to represent themselves as "dental operators," yet the army authorities will not employ them as such. This may be only a small point, but it certainly is a step in the right direction.—Yours faithfully,

LIEUT. J. STEVENS.
Dental Officer.

"Knottsall,"
Wembley.
16th July, 1917.

Differential Diagnosis of the Acute Abdomen.

CLINICAL LECTURE BY CAPT. E. C. HUGHES.

Gentlemen,—The diagnosis of acute abdominal conditions is arrived at by deductions from the various symptoms and physical signs. It is extremely important from the point of view of prognosis, not only to make a correct diagnosis, but also to make it at the onset of the symptoms, so that we may at once proceed to deal with the illness, whatever it may be, and in whatever way it may be necessary.

The diagnosis, as a rule, becomes more and more obvious the longer the disease has been in progress, but in acute abdomens, the majority of which need immediate operation, the prognosis becomes worse the longer operation is delayed. I thought it would make the subject more interesting if I dealt with it from a clinical point of view, and I am going to ask you to imagine that we have been called to see a patient who had been suddenly seized with the three initial symptoms of acute abdominal disease, *i.e.*, severe pain in the abdomen, shock, and vomiting.

These three symptoms are met with in a more or less marked degree in any intra-abdominal catastrophe, *e.g.*, perforation of hollow viscus, intestinal obstruction or thrombosis of the mesenteric vessels, etc., and also in other conditions which may or may not have their seat in the abdomen, *e.g.*, biliary, renal, intestinal, or lead colic, ptomaine poisoning, acute gastritis, the onset of pneumonia, the onset of uræmia, gastric crises of tabes, etc.

I think it wise in all these cases to remember the "gums and jerks," so as to negative at once the possibility of lead colic and tabetic gastric crises. But we must remember that the blue line of lead poisoning, or the altered and absent reflexes of tabes do not prevent the patient from also having an acute abdomen.

I remember a batch of four cases some years ago admitted with the diagnosis of lead colic: two of these cases were perforated duodenal ulcers, and a third was an acute obstruction of the large bowel supervening on a chronic obstruction due to a growth of the splenic flexure. So we must go warily before labelling an acute abdomen lead colic or a tabetic crisis.

The patient, who may be recovering from the shock of the onset of symptoms, will at once draw attention to the position of his pain. The pain of acute abdomen is at first referred to the umbilicus, but later on to that part of the abdominal wall which overlies the damaged viscus. The pain of a perforated gastric ulcer will be in the epigastric region, of a duodenal ulcer in the same region, but to the right of the mid line, of an appendicitis in the right iliac fossa, etc.

As regards the shock, I shall say no more than that it may be so marked that the patient may die from it, or so slight that it may pass unnoticed.

Then, glancing at the face, if the abdominal pain be intense, he will have an anxious expression, and if the symptoms have been in progress for some time, he will have a typical abdominal face, sunken eyes with dark circles about them, a pinched face, and a livid colour.

But if the pain be not severe, or if he be observed in the interval between paroxysms of pain, the expression may be placid, or if the temperature be raised there may be a flush on the cheeks. As a rule, the pain is continuous in peritoneal inflammations or irritations, *e.g.*, a perforated viscus, and intermittent in an obstruction.

The temperature is raised in an initial inflammatory region in the appendix or pelvic viscera, but not in an intestinal obstruction, nor in a perforated viscus until inflammatory pro-

ducts have been formed and are being absorbed. The respirations may be increased in rate, the alæ nasi working briskly: this may be due to the distension of the abdomen increasing the necessity for rapid respiration, to a simultaneous disease in the chest or abdomen, or to respiratory disease, *e.g.*, pneumonia beginning with marked abdominal symptoms.

Then, again, there may be extreme pallor of the face, so marked that it may be difficult to differentiate between the mucous membrane of the lips and the skin around. This pallor in a woman may suggest the loss of a quantity of blood, the result of a ruptured ectopic gestation.

Then with regard to the position and general appearance of the patient; he may be lying flat on his back with the hips and knees slightly flexed and the arms extended behind the head; and this is the common position in which we find a patient with extensive peritoneal inflammation; or he may be restless, throwing himself about in his bed writhing with pain, and such symptoms are present when involuntary muscle fibre is working against an insuperable obstruction, *e.g.*, in intestinal obstruction or biliary and renal colic.

A woman suffering from a ruptured ectopic gestation, who has lost much blood, is very restless, and this restlessness, with the marked and sighing respiration, are three most important symptoms in this condition, and indicate that an enormous amount of blood has been lost.

Now let us pass on to the abdomen, and here we may find marks produced by applications for the relief of pain. The skin may be actually blistered, so hot have the applications been. We look, too, for the scars of previous operations; the importance of their presence is that the acute abdomen may be due to some adventitious peritoneal band or adhesion obstructing a coil of intestine. Before making any other observation, we must rapidly examine the femoral and inguinal regions, so that the question of a strangulated hernia can be at once put out of court. A small strangulated hernia, particularly of the femoral type, has been time and time again overlooked, and the abdomen opened before the real cause of the trouble was found.

And in some anomalous cases we may find a hernia present, but not suggesting by its feel that it may be the cause of the obstruction; it may feel soft and slack, but I believe when one is present it should always be cut on first before proceeding to the abdomen, because, as a rule, it will be the cause of the obstruction. [Quite recently I did not observe this rule in a patient who had been obstructed for many days. Here the abdomen was enormously distended, with visible peristalsis showing under the thin abdominal wall. A large left inguinal hernia was present; it was quite soft except when a wave of peristalsis swept down it. I thought the obstruction was due to a growth in the colon, but at the operation I found it to be due to matting in the hernial sac.]

Having made certain that no external hernia is present, let us proceed to look at the abdomen.

Distension, Rigidity, and Immobility.—First with regard to distension, all stages between retraction and extreme distension may be met with. In the early stages of a peritonitis or an obstruction the normal is not much departed from, but towards the later stages there may be extreme distension. In small intestine obstruction, if high up, it appears late, and is not marked, but with large intestine it is early marked; further, when the large intestine is obstructed towards the rectum, the flanks as well as the central part of the abdomen are distended, while with the small intestine alone obstructed, the distension of the flanks is absent.

In peritonitis, as a rule, the distension is not of a very high grade until death is imminent, and there are other signs, *e.g.*, immobility and

rigidity, present which point to the correct diagnosis.

Apart from this general distension there may be a local prominence of the abdominal wall, when an ovarian cyst, whose presence has never been suspected suddenly undergoes torsion, and causes an acute abdomen.

The cyst then becomes larger and tense, and, if not in the pelvis, will be detected as a visible, or, if not visible, as an easily palpable, lump in some part of the abdomen.

We may, while looking at the abdomen, see peristaltic movements of the intestines. Perhaps it is hardly fair to bring such cases under the heading of an acute abdomen, as it takes some time before the intestines can hypertrophy to such an extent as to be obvious through the abdominal wall. But still, there are many essentially chronic abdominal diseases, *e.g.*, growths of the large intestine, which present themselves to our notice as acute intestinal obstructions.

Then with regard to rigidity and immobility, again the normal may not be departed from, the abdominal wall being supple, and moving with respiration; and it is particularly in an obstruction with no involvement of the parietal peritoneum that the abdominal wall is normal except for any distension that may be present.

Now in peritonitis, whether local or general, there is a limitation of abdominal respiration in part or altogether, and the abdominal muscles overlying the damaged part are rigid. The rigidity and immobility are due to the effort to prevent any friction of inflamed or damaged coils of gut on one another, and on the parietal peritoneum. The two signs are very well seen in cases of perforated duodenal ulcer, where the patient has shortly before his perforation had a big meal, and then ejected it into his general peritoneal cavity. Here the abdomen is at once flat, absolutely immobile, and as rigid as a board.

Percussion of the abdomen will detect any abnormal dull areas in the abdomen, *e.g.*, a distended bladder or any ovarian cyst, but I use it chiefly to detect two points: (1) The presence of free fluid, as shown by the shifting dulness with changes of the patient's position; and (2) the presence of free gas in the abdominal cavity, and this is shown by the early and absolute disappearance of the liver dulness. This sign is of great importance, but only where there is not much distension of the abdomen. For when there is much distension the intestines crowd out the liver and may prevent it from coming into contact with the abdominal wall. With regard to free fluid, whenever a viscus ruptures, the peritoneum is irritated, and as a result it pours out a copious fluid exudate, and at the operation this is seen by the enormous amount of fluid which escapes from the abdominal cavity, far more than could have come from the viscus itself. Unfortunately, the presence of free fluid is not evidence that we are dealing with a perforation, for any irritation of the peritoneum will cause this profuse outpouring of fluid. Now a considerable proportion of obstructions are caused by peritoneal bands or adhesions and these bands tie down a loop of bowel and obstruct it, and in so doing cause by their tight pressure intense irritation, with the result that a quantity of fluid is poured out and is shown by the shifting dulness. This is a very important sign in the diagnosis of the cause of the obstruction, and if I meet with a case in a young adult, who is unlikely to have a malignant growth, and find free fluid, I confidently expect the case to be obstruction by a band, if tubercular peritonitis can be excluded, and operation generally proves it to be the correct diagnosis. This copious outpouring of fluid is well seen in operations for strangulated femoral hernia, where, after dealing with the cause of the obstruction and reducing the bowel, an enormous amount of

clear or blood-stained fluid may well up into the wound. Dressers assisting me at the operation have felt certain that I had opened the bladder, and only by soaking a sponge in the fluid and showing the absence of bubbling on adding sodium hypobromite have I been able to convince them that it was peritoneal fluid and not urine. Free fluid is very likely to be present in malignant and tubercular peritonitis, which often begin as an acute abdomen.

Constipation.—In peritonitis, if at all extensive, the intestines suffer from a gradually increasing paralytic distension, so that in spite of drugs and enemata no fæces nor flatus may be passed, and in severe cases enemata may be retained, a sign of bad prognosis. Pelvic peritonitis, however, and peritonitis due to the pneumococcus may be accompanied by diarrhœa. Now, with obstruction, the bowel above is contracting actively in its efforts to overcome the obstruction, while below it is contracted and collapsed. The effect of an enema is frequently to produce an apparently normal action, for it empties the bowel below the obstruction, the gut not being paralysed. If the possibility of this occurrence be forgotten, a mistake may be made. A further enema would produce no result and afterwards no flatus nor fæces would be passed.

Vomiting.—I mentioned this as one of the three initial symptoms of an acute abdomen. After the initial vomiting there is, as a rule, a pause, after which the vomiting may or may not begin again. With progressing inflammation of the peritoneal cavity the vomiting becomes frequent and effortless, at first the contents of the stomach, and later on becoming biliary; it is very rare for it to become fæculent. While with obstruction there is the initial vomiting followed by a pause, after which it begins again, gradually increasing in frequency and amount, at first the gastric contents, later biliary in nature, and finally becoming fæculent. The higher the site of obstruction is in the intestine, the sooner does the vomit become fæcal.

Influence on Respiration.—Distension of the abdomen causes pressure on and embarrasses the diaphragm, and so the respiration will after a time be shallow and more rapid, and the patient may suffer from deficient aeration of the blood. The diaphragm, if its peritoneal surface be inflamed or irritated from any cause whatever, *e.g.*, a perforated gastric ulcer, will be thrown out of action in the same way as the abdominal muscles. If only one half is affected, that half will not move so freely as normally, and it is probably on this account that the occasional difficulty in diagnosis arises between a lobar pneumonia and a perforated gastric ulcer.

Rectal and Vaginal Examinations made in a routine examination of an acute abdomen may reveal nothing or a great deal. If secondary to any disease of the female organs, enlarged tubes, inflammatory masses or tumours may be felt. In general or pelvic peritonitis, or blood in the peritoneal cavity, there will be great pain when the pelvic peritoneum is pressed upon. A nodule of new growth may be felt in the pouch of Douglas, and may suggest the acute abdomen is secondary to a growth of the intestine, with dissemination under the peritoneum. A gall-stone or a growth may be felt. When the examining finger is withdrawn from the rectum it may have on it some altered blood or some abnormal material. The vaginal examination may detect a growth, a copious purulent discharge, or dark blood in the case of a ruptured ectopic gestation.

Pulse Rate.—This is of extreme importance, not so much from the diagnostic point of view, but as an indicator to the progress of the disease. In any doubtful acute abdomen, when

the question arises as to whether we are dealing with a colic, or a perforation, or an obstruction, half-hourly observations of the pulse should be taken, and a pulse rate gradually increasing in frequency will indicate that something more serious than a colic is the cause of the acute symptoms.

Temperature.—This is not of much importance at the onset of acute symptoms, initial inflammatory affections only causing a rise of temperature, *e.g.*, appendicitis and pelvic peritonitis, and the temperature seldom rises to more than 101° I believe one disease only that we have to deal with as an acute abdomen has a higher temperature and that is pneumococcal peritonitis. This disease is frequently mistaken for a gangrenous appendix, but the high temperature, 104°, as a rule, will be a safe guide to the correct diagnosis. The initial shock, if at all severe, is accompanied by subnormal temperature, but if the patient rallies from the shock the temperature rises to the normal. In the most severe types of acute hæmorrhagic pancreatitis the temperature remains subnormal throughout.

Urine.—The urine should invariably be examined, and if none has been passed, and cannot be passed, a catheter should be used to empty the bladder. Perhaps no urine can be drawn off, and if this is so it may suggest suppression of urine, the acute abdomen being simulated by uræmia beginning with abdominal symptoms. Inability to pass urine may be due to an inflamed organ in close proximity to the bladder, reflexly inhibiting it. After symptoms of an acute abdomen have been in progress some time, very little urine may be passed, because of a great loss of fluid by vomiting and in other ways. A distended bladder alone will not cause an acute abdomen, except in post-operative conditions; I met with a case where symptoms suggesting a peritonitis began after a resection of the bowel for growth. In such cases a sharp watch is kept in view of the possibility of leakage occurring at the anastomosis. Here pain and vomiting began, the latter increasing in frequency, and the abdomen was becoming distended. I inquired and was told that urine was being passed without any trouble. I operated and found a distended bladder, which, when emptied by regular catheterisation, caused all the acute symptoms to pass away. In such cases before resorting to operative measures a catheter should be passed, whether urine is said to have been passed or not.

Age.—At certain ages certain diseases are common.

Obstructions. — Intussusceptions from six months to three years; strangulation by bands, 15—30 years; volvulus, elderly people; gall-stones, elderly fat females; growths, elderly people; strangulated external hernia, at any age, but uncommon in infancy and childhood.

Inflammations. — Perforated gastric ulcers, 20—40; perforated duodenal ulcers in males of 30; appendicitis, children and young adults up to 30; ruptured ectopic gestation, 24—30; inflamed female pelvic viscera in child-bearing age; diverticulitis of large intestines in fat subjects of middle age; pneumococcal peritonitis in children and young adults. And, finally, we shall rapidly examine other organs, particularly the lungs, the gums for a blue line, and the knee-jerks before we consider the diagnosis.

Previous history.—In many cases there will be nothing unusual, the patient having been in perfect health up to the moment of the acute abdomen. With perforation of gastric or duodenal ulcers, there is, in the majority of cases, a history of preceding indigestion, perhaps of short duration or of some months, and very frequently of the symptoms typical of such an ulcer. I have seen on two occasions at least

a previous history of indigestion lead a surgeon astray; two women, æt. 26 approximately, presented the symptoms of an acute abdomen, with no very definite pointer to its cause other than a previous history of indigestion: both these cases were opened as if for a perforated gastric ulcer, but the presence of free blood in the peritoneal cavity showed the cases to be ruptured ectopic gestations. These cases are very liable to be confused with other types of acute abdomens, because so many of them occur in anæmic women, who have often been irregular in their periods, so that the special significance of the irregularity may be overlooked. Some cases of perforated duodenal ulcer are first operated on as if for appendicitis, because the fluid runs down into the right iliac fossa, being guided there by the ascending colon, and causes symptoms indistinguishable from an inflammation of the appendix. And in some cases there is grave doubt as to which is the organ at fault, and a previous history of indigestion of the typical duodenal type may put us on the right track. With appendicitis, whose first symptoms as an acute abdomen are due to involvement of the peritoneum, there is often a history of indefinite ill-health for a few preceding days, and I suppose that during that time toxins are being absorbed from the inflamed mucous membrane. But more often we shall hear that there have been previously one or more attacks of abdominal pain, which the patients themselves may have disregarded, or considered it to be an acute gastritis or a ptomaine poisoning. An important point of distinction between appendicitis and a perforated viscus is the suddenness with which the pain and other initial symptoms begin in the latter condition, while with the former the pain works up to a maximum.

This leads us on to that type of case where symptoms appear shortly after a large indigestible meal, and the question arises whether we are dealing with an acute gastritis, a ptomaine poisoning, or a perforation of a gastric ulcer, or an appendicitis. In some cases two or more members of a family have had similar symptoms, as in a case where a husband and wife had a meal of steak and kidney pie both were shortly seized with acute abdominal pain: the man was admitted and operated on for acute appendicitis and a gangrenous appendix was found, while the woman never came under treatment at all, her symptoms rapidly subsiding. I have seen many cases of acute appendicitis where the patients have assigned as the cause of their illness some apparent indiscretion in diet, fish, unripe apples, etc.

Then there is the question of a slight injury —I do not wish to refer to ruptured intestines —a boy falls down while playing, at once jumps up and goes on playing, or he falls off a chair and shortly afterwards an acute abdomen showed itself and he is found to have an acute appendicitis. Returning again to indigestion: in elderly patients who are operated on for an intestinal obstruction, due to a growth of the large intestine, there is a frequent history of indigestion for some months preceding the obstruction. There may have been occasional vomiting and pain, but these symptoms are due to a gradually developing obstruction in the large intestine.

And again, with gall-stones. As a rule there have been symptoms for many years of some type of indigestion, *e.g.*, a flatulent dyspepsia, the symptoms being in reality due to gall-stones; and though stout females do not have the monopoly of these stones, they enjoy, I believe, the monopoly of intestinal obstruction due to the impaction of these stones in the small intestine. The patient may have lost weight in the preceding months and this may point to tubercle, malignant disease, or a chronic indigestion, and in women we shall inquire for

any irregularity of menstrual flow, which may indicate a ruptured ectopic gestation, for profuse and more frequent periods, which may point to some pelvic inflammation not necessarily of the generative organs, or for any foul smelling vaginal discharge. Then we shall want to know if there has been any abnormality in the appearance or shape of the motions; and particularly if blood has been passed. In infants it is sometimes extremely difficult to say whether the acute symptoms are due to an acute colitis or to an intussusception, the difficulty arising when no abdominal tumour can be detected. Inspection of the motions will, as a rule, differentiate between the two conditions. Both are blood-stained and contain mucus; the motion of acute colitis, however, contains fæcal material, while of the intussusception there is none. There are not many conditions where a quantity of blood is passed, the only common one being malignant ulceration of the rectum; I am excluding typhoid fever, which sometimes assumes the picture of an acute abdomen.

A rare type is a thrombosis of the mesenteric vein, and in this condition a large quantity of blood is passed per anum; and if we are able to diagnose this lesion, which I doubt, it is only by this passage of blood. I do not think inquiries into the patient's occupation will help us. For we may find that he is a worker in lead, and we shall be at once prejudiced in favour of lead colic. But lead colic so severe as to simulate an acute abdomen is very uncommon.

Finally, it is only a careful consideration of the symptoms, the history of the attack, and the previous history, together with a routine examination of the organs, which will prevent one making mistakes in dealing with the acute abdomen, and when we meet with an anomalous case we must be careful to bear in mind the possibility of tubercular or malignant disease.

Appointments.

The following appointments have been made :—

R.N.M.S.

L. B. Stringer to be temp. Surgeon.

R.N.V.R.

W. H. Mller has been appointed Surg. Prob. to the *Fervent*.

R.A.M.C.

Lieut.-Col. W. F. Davies, D.S.O., S. African M.C., to be temp. Major.

Temp. Hon. Lieut.-Col. C. H. Fagge (Major R.A.M.C. T.F.) relinquishes his temporary rank on re-posting.

Temp. Lieuts. to be temp. Capts. :—L. Bensted, S. G. Graham, F. D. Saner, J. A. B. Hammond, R. Roberts, A. A. Greenwood (as from May 8th, 1917), A. E. Rayner.

To be temp. Capts. :—A. E. Boycott, A. E. Kelsey (late Fleet Surg., R.N.).

W. C. Mc N. Dickey, late temp. Capt., to be Hon. Capt.

To be temp. Lieuts. :—E. Morgan, F. L. Thomas, C. W. Stevenson, E. C. Roberts, L. D. Wright, G. R. Phillips, R. Parry, G. Cockcroft, V. Glendinning, R. J. Reynolds, B. Blackwood, H. H. Jenkins,

Officer relinquishing his Commission :—Capt. A. G. Levy on account of ill-health.

Major R. H. Jocelyn Swan, R.A.M.C., Senior Surgeon to the the Royal Herbert Hospital, Woolwich, has also been appointed Consulting Surgeon to the Woolwich District.

Special Reserve of Officers.

Lieutenant to be Captain :—B. E. Jerwood.

Thomas D. Lister, M.D., has been appointed Physician to the Prince of Wales Hospital for Officers.

Civil.

A. R. Wilson, M.D., has been appointed Medical Officer and Public Vaccinator to the No. 3 District of the Blandford Union.

Pass List.

University of London.

FIRST AND SECOND EXAMINATIONS FOR MEDICAL DEGREES.

At the Examination held last month the undermentioned candidates were successful :—

First Examination.—B. Kessel, A. T. Rogers.

Second Examination, Part I.—K. J. K. Davies, L. R. A. Wells.

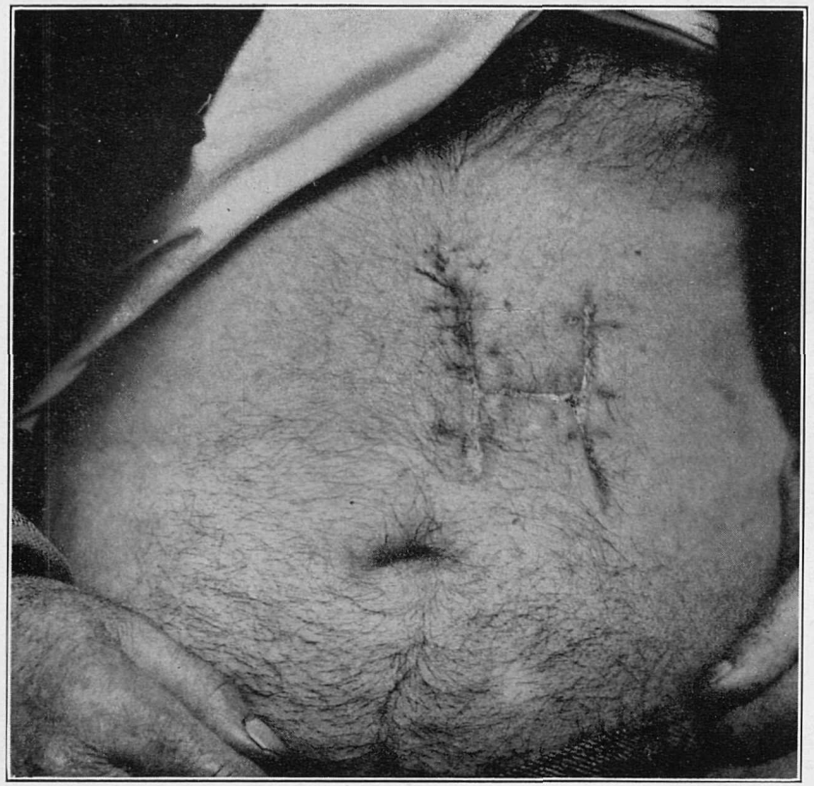

Fig. 1.

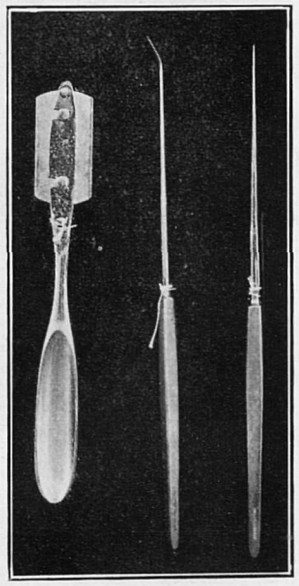

Fig. 4.

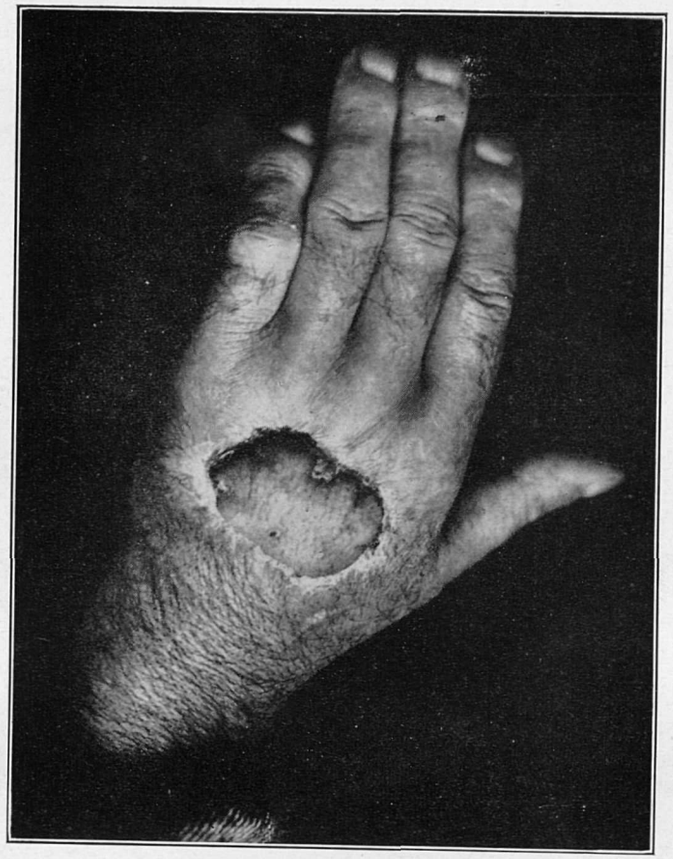

Fig. 2.

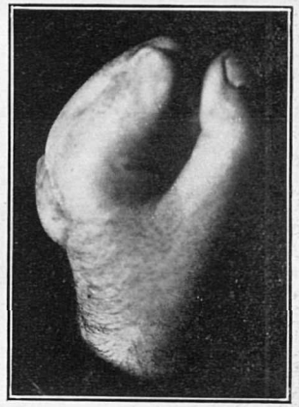

Fig. 3.

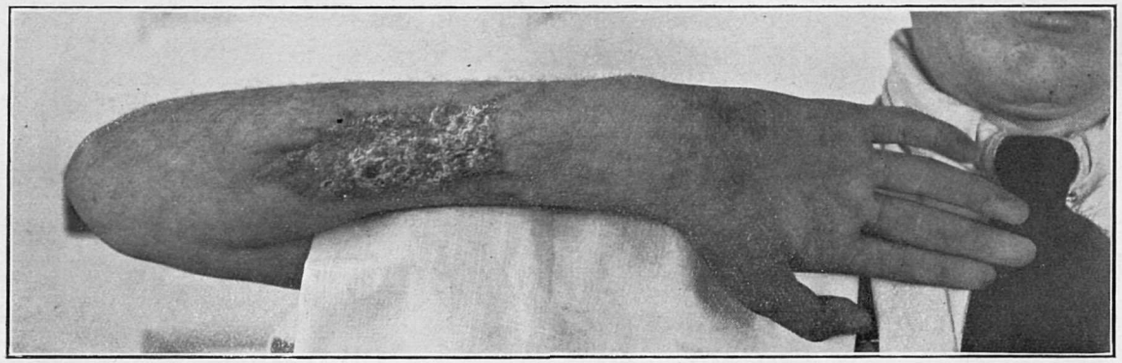

Fig. 5.

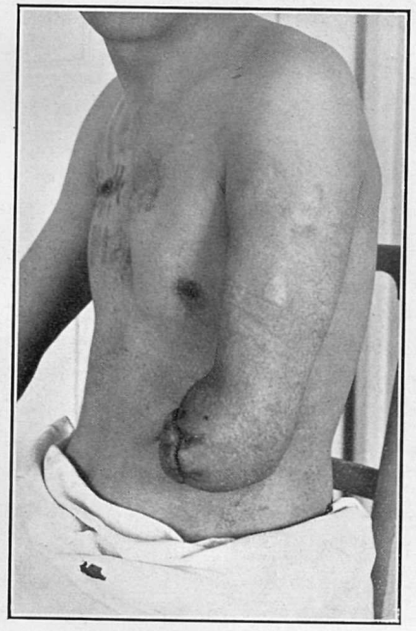

Fig. 6.

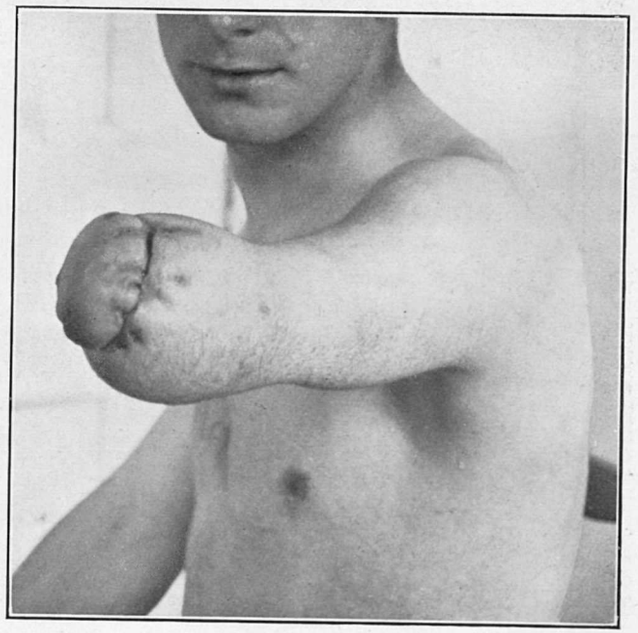

Fig. 7.

"On the Uses and Technique of Skin-Grafting." By W. E. Tanner, F.R.C.S.

On the Uses and Technique of Skin-Grafting.

BY W. E. TANNER, M.B., B.S., F.R.C.S.
Lieut. R A.M.C.
Surgeon, The Lord Derby War Hospital.

J. F., æt. 51, a miner in Wales, was admitted into Luke ward in August, 1916, under the care of Sir Alfred Fripp. He stated that a year previously a large piece of coal had fallen on the back of his hand, a small area of skin being ripped away. Subsequently the site of abrasion became infected and the hand swollen. He then saw a doctor, who ordered hot boracic fomentations and ointment, but as no improvement followed he attended the Out-Patient Department, Guy's Hospital. He was then treated in the Light Department with X-rays, with pastille, diathermy and radium. The ulcer became worse, and the question of malignancy arose.

On admission.—There was an ulcer on the back of his hand about the size of a half-crown. The borders of the ulcer were regular, elevated and rounded, the surrounding tissues being indurated and congested for about half an inch around the periphery. The base was hard and covered by a dark, rough scab. There was no pain or tenderness. Microscopical examination of a small portion, removed under a local anæsthetic, showed that it was "a simple chronic ulcer, with no signs of malignant change." X-ray examination showed "slight atrophic changes in the bones of the wrist, due to the proximity of the ulcer No evidence of tubercle". It was then decided to excise the diseased tissues.

Operation.—An incision was made about half an inch away from the periphery of the ulcer. The skin, superficial and deep fasciæ were incised, so that, on removing the diseased tissue, the dorsal tendons were exposed. Next, two parallel incisions were made on the anterior abdominal wall, just to the left of the mid-line. A flap of skin and fatty superficial fascia was thus obtained, which measured about five inches in length and two inches in breadth. This flap was separated from the deeper structures, so as to be about one-quarter of an inch in thickness. The hand was then placed between the flap and the abdominal wall, so that the bare area on the dorsum was covered by the flap. In this position salmon gut sutures were inserted between the lateral margins of the flap and of the bare area on the dorsum of the hand. The arm, flexed to a right angle, was firmly bandaged to the side, and the wounds irrigated daily with hydrogen peroxide, weak iodine solution, and a hot boracic fomentation applied.

On the tenth day union had taken place. A few days later the flap was cut through above and below, leaving a little more graft than was necessary to completely cover the ulcer, and the hand set free. The upper and lower edges of the graft were then sutured to the upper and lower edges of the wound on the dorsum of the hand, and the abdominal wound was brought together without tension by means of salmon gut sutures.

Passive movements and massage of the fingers were now commenced, and by the time the patient left the Hospital there was no impairment of movement of the fingers (see Fig. 3, taken in November, 1916). The graft was firmly united and healthy.

I am indebted to Sir Alfred Fripp for permission to publish this case, and to Mr. J. Victory for preparing the notes, and for his great care in the after-treatment.

From September, 1915, to December, 1916, fifteen operations of skin-grafting, by a modification of Thiersch's method, were performed at Guy's Hospital. The successful results obtained in all but one case were due to the use of the method described below. The doubtful

case is that of a boy in Cornelius ward, under the care of Sir Alfred Fripp, in November, 1916. The boy had an extensive laceration of the thigh. It was impossible to cut good grafts from the opposite thigh, which was thin and emaciated. The surface was not completely covered. The ultimate result was not seen.

As soon as the area to be grafted is covered with healthy, red granulations, the adjacent skin is thoroughly cleansed, and hot fomentations of boracic or normal saline are applied every four hours to the granulations. In the more recent cases, due to gunshot wounds, the granulations are covered with eusol soaks, and the surrounding skin is painted with 2½ per cent. iodine.

On the day before operation the area from which the grafts are to be taken (usually the skin of the upper part of the thigh) is carefully washed with soap and water, shaved, washed with ether, and then covered with dry sterile pads, which are not removed until the time of operation.

The actual method of grafting.—The raw area should be covered with healthy, red granulations (hypertonic saline, Carrel-Dakin solution, eusol soaks and flavine produce excellent granulations). The granulations should not be curetted at the time of the operation, because curettage causes an exudation of blood, serum, and sero-pus, which lifts the grafts from their bed and, by the liberation of tryptic ferments, causes disintegration of the epithelium.

In the earlier cases, the free edge of the ulcer was scraped, and oozing checked by firm pressure with sterile swabs wrung out of normal saline of 120 degrees Fahrenheit, or a few drops of adrenalin were applied direct to the oozing surface. In the later cases, the free edge of the ulcer was not scraped and the results were quite as satisfactory.

The skin from which the grafts are to be taken is moistened with sterile normal saline, an assistant stretches the skin with two flat rectangular metal blocks covered with sterile swabs. The grafts are cut with a Gillette razor blade, mounted on a special handle (see Fg. 4.) by a rapid to-and-fro sawing movement. Very thin epidermal grafts, five inches long and one and a half to two inches wide, may be cut with this instrument.

The graft on the razor blade is then transferred direct to the granulating surface and flattened out with needles. A great amount of time is saved by one operator cutting the grafts, and another arranging them on the granulations. The surface is completely covered with grafts, which overlap one another and also cover the healing edge.

If the granulations are *not* scraped, the grafts will lie firmly and evenly, there is no exudation, and air bubbles are easily removed by manipulating the needles. A suitable "cage splint" is then applied to protect, but not to touch, the grafts. A few turns of sterile gauze roll are wound round the perforated metal cage. There is often severe pain, like that due to a burn, in the area from which the grafts have been taken. This area is painted with 2½ per cent. iodine solution and covered with dry sterile pads. A "cage splint," suitable for the case under treatment and capable of firm fixation, must be ready before the operation is commenced.

For grafting on to the limbs; a suitable splint, on to which is fixed a tunnel of perforated tin or zinc, is required. The tunnel should be hinged on one side so that it may be lifted easily in order to examine the grafts.

If the granulations are *not* scraped, there is no need to interfere with the splint for ten or fourteen days, when it may be removed.

In the case of a girl admitted into Dorcas Ward, under the care of Mr. L. A. Dunn, the skin covering the terminal phalanx of the thumb was torn away, exposing the bone with its flexor and extensor tendons still attached. The surface became covered with granulations, and grafts were applied. The grafts were protected

by a wire cage, devised by Mr. C. H. Medlock, similar in shape to that used to protect gas jets; the thumb being in a position corresponding to the burner. The grafts became firmly united to the granulations, and the girl had a useful thumb.

For grafts on the flexor aspect of the lower limbs a splint, with an interruption at the site of grafting, is used. Grafts on the trunk are protected by perforated sheet tin fixed with collodion and strapping.

The advantages of a "cage splint" are important. There is no fear of mechanical disturbance of the grafts, which have free access to the air, but are protected from contamination with dust by the sterile gauze roll. The use of protectives made from celluloid, oiled silk, or other fabrics, is avoided. The patient requires careful supervision until round from the anæsthetic. The grafts will be firmly united at the end of ten or fourteen days. The cage is then removed and hot boracic fomentations are applied.

The above method has been used also in several cases of gunshot wound, where suture was impossible, with successful results. Details of one case can be given; the others have left the Hospital.

Rfm D. was wounded on May 3rd, 1917, a large mass of skin, fascia, and muscle from the front of the right forearm was blown away. On May 30th the granulating surface was covered with Thiersch grafts. On June 11th fomentations were applied. All the grafts took (see Fig. 5).

Autoplastic pedicle grafts.—In this case an attempt has been made to save an elbow-joint by the use of a pedicle graft. Although the forearm stump is very short, it is an example of a successful method of avoiding the great sacrifice of tissue, especially bone, in treating flush amputations.

Pte. H. B. was wounded at Arras on April 28th, 1917. He had a gunshot wound of the left forearm, with a compound comminuted fracture of the radius and ulna. On April 29th a flush amputation was performed above the middle third of the forearm.

When admitted to the Lord Derby War Hospital on May 11th the stump was septic, and the ends of the radius and ulna were projecting through granulations. The wound was dressed with eusol soaks. On May 18th small pieces of necrosed bone were removed from the ends of the radius and ulna. On May 26th granulations covered the ends of both bones. On May 29th the wound was quite clean and covered with healthy red granulations. An examination was made for irritable ends of nerves, but none were found. On May 30th an anæsthetic was given, and a flap of skin, superficial, and deep fascia, was raised from the left side of the abdominal wall. The flap was fashioned about one-third larger than the granulating stump.

The edges of the flap were secured to the edges of the granulating wound by means of interrupted salmon gut sutures. The united edges were then painted with 2½ per cent. iodine and a dry sterile dressing applied.

The wound was examined on June 2nd, and from that time was dressed with eusol soaks every other day. After June 4th the patient was allowed to walk about the hospital. The stitches were removed on June 18th; the wound was quite clean, and the patient could bend his elbow-joint, moving the stump without pain (see Fig. 6, taken on July 18th). On July 5th the broad pedicle of the flap was divided, separating the stump from the abdominal wall. The cut edge of the graft was sutured to the inner edge of the stump.

The stump is now covered with a cushion of healthy skin and fatty tissue, and no pain is caused by firm pressure upon the graft. The value of this stump when an artificial limb has been fitted will be reported later. Fig. 7 is a photograph of the stump taken on July 18th.

The use of autoplastic pedicle grafts should find a wide application in military surgery, especially in the case of extensive flesh wounds, where a large amount of tissue has been destroyed at the time of injury or subsequently excised.

For example, in a wound of the forearm, provided that a thick pad of fat is in the graft and passive movements are maintained from

the beginning, the range of movement of the fingers will not be less than was present when the case first came under treatment. The first case shows that fat is a satisfactory tissue to graft on to a base where tendons are exposed; an opportunity of using a graft containing a bursa will not often present itself.

A good pad of fat gives a satisfactory covering for the end of a stump in the upper limb—a priori, the presence of a bursa would make the skin and fat on the end of the stump more freely moveable on the deeper tissues.

Destruction of tissue is such a distressing feature of many varieties of gunshot wounds that, if a suitable opportunity arises, homoplastic grafts might be tried.

A useful point in treatment is to suspend a red or white electric bulb from a cradle placed over the dressings covering any tissues whose vitality is in doubt, such as grafts or a limb in which a main artery has been ligatured. This simple measure is also a great help to tissues subjected to bacterial invasion.

It has been used with success in four cases of septic synovitis of the knee, which were first aspirated. Although cultivations of streptococci and staphylococci were obtained from the aspirated fluid, they settled down without arthrotomy.

I have to thank Lieut.-Col. A. Simpson and Major G. Sichel, R.A.M.C., for permission to publish the cases due to gunshot wounds, and Capt. C. M. Stubbs, R.A.M.C., for valuable help.

The Lord Derby War Hospital,
Warrington.

Honours.

2nd Bar to Military Cross.

Temp. Capt. A. C. Hancock, M.C., R.A.M.C. For conspicuous gallantry and devotion to duty. He established his A.D.S. in the village, although it was under very heavy shell fire. He attended and evacuated a very large number of wounded, working all night, finally going out himself along the front to see if there were any left.

Bar to Military Cross.

Temp. Capt. James Lennox Stewart, M.C., R.A.M.C. attached to the Gordon Highlanders. For conspicuous gallantry and devotion to duty. He behaved with the utmost gallantry in removing the wounded under shell fire. He continued to work in the open, exposed to severe shell and machine-gun fire, until every wounded man had been brought in.

Military Cross.

Temp. Capt. R. O. H. Jones, R.A.M.C. For conspicuous gallantry and devotion to duty. For many hours he had to occupy a most exposed position under heavy fire, where he dressed and attended the wounded at great personal risk.

Temp. Capt. P. J. Watkin, R.A.M.C., attached to the Bedfordshire Regiment. For two days he dressed the wounded under heavy shell-fire, and when the captured trenches had been cleared he commenced to search the shell-holes in "No man's land" in spite of heavy sniping fire, until ordered to desist.

Temp. Capt. G. F. Hardy, R.A.M.C., recently mentioned in despatches, had at the same time the honour of receiving the Military Cross.

2nd Lieut. H. E. Marsh, L.D.S., D.D.S.Penn., R.F.A. (T), has been awarded the Military Cross for bravery in the field during the Messines-Ypres offensive.

Temp. Capt. H. G. Dresing, R.A.M.C. For conspicuous gallantry and devotion to duty. After being shelled out of his dressing station, he took up another position and continued throughout the day, and performed operations under heavy shell-fire, which was causing continual casualties around him.

Temp. Capt. K. M. Nelson, R.A.M.C. For conspicuous gallantry and devotion to duty in attending to the wounded with the utmost fearlessness under heavy shell and machine-gun fire. He constantly went out to our most advanced positions in aid of the wounded, and his careful search of the battlefield resulted in most of the more serious cases being found and brought back to the dressing station. His unselfish devotion was directly the cause of so many lives being saved.

Mentioned in Despatches.

The names of the following Medical Officers are mentioned in a despatch dated March 29th, 1917, received from Lieut.-Gen. G. F. Milne, C.B., D.S.O., for "distinguished service," rendered during the six months ending March last, in connection with operations in Salonica:—

Major (temp. Lieut.-Col.) J. Matthews.
Temp. Lieut.-Col. W. L. W. Marshall, R.A.M.C.

Foreign Decorations.

RUSSIAN.

Order of St. Stanislas—2nd class (with swords).

The name of Fleet-Surg. C. M. Beadnell to be deleted from the list given in June last.

BELGIAN.

Ordre de Léopold (Chevalier)—Temp. Capt. M. Coplans, D.S.O., R.A.M.C.

Marriage.

MONTGOMERY—McELROY.—On the 20th of June, 1917, at St. Charles's Ogle St., W. by the Rev. Ernest D. Hainfin, Samuel Alexander Montgomery, son of the late Samuel Delmege Montgomery, Omagh, to Nellie Teresa, daughter of the late Bernard McElroy, Esq., of Leigherntain, Killala, Co. Mayo.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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The Control of the Army Medical Service.

IN our last issue we attempted to summarise some of the complaints against the Army Medical Service which have come to light during the past year, and expressed the opinion that some of the failures might have been avoided had the controlling powers of the Army Medical Service been in closer touch with the medical profession. Our statement that the Army Medical Advisory Board had not met during the war has been confirmed by the reply of Mr. Macpherson to Sir Garrod Thomas in the House of Commons. The Advisory Board apparently consists of eleven members, of whom seven are military and four civilian members. The Board held ten meetings in 1913 and seven in 1914, but since August, 1914, no formal meetings of the Board have been held, in spite of the fact that the four civilian members receive £200 per annum for their services.

It certainly must strike any ordinary observer as remarkable that, if ten meetings were held in a year of peace such as 1913, it should not have been deemed necessary to call the Board together even once in the past three years, when the work of the Army Medical Service has been revolutionised in extent and character. It would rather appear as if the Director General had decided on the outbreak of war to throw over the principles of administration which had been laid down for him by the Royal Commission, who investigated the whole subject some years before the war. Had there been no hitches in medical administration, the supreme autocracy of the Director General might have been justified by the successful achievements of the Army Medical Service, but in the present condition of affairs, when in the minds of many of the most able members of the medical profession there is some suspicion of the capabilities of the Army Medical Service, surely it is time that the Advisory Board should meet to attempt to restore public confidence.

As Sir Garrod Thomas pointed out in the House of Commons on August 8th, the number of civilian doctors in the Army Medical Service outnumbered the regular R.A.M.C. officers by more than ten to one. Yet, in spite of this preponderance of civilian talent, the higher administrative posts are nearly all held by regular officers. Military discipline stifles effectually any suggestions or criticisms from the junior ranks of the R.A.M.C., in spite of

the fact that in many cases they are in a much better position to suggest reforms than their superiors, whose work is almost confined to an office.

Though we should be extremely unwilling to deny the necessity for strict discipline in the combatant branches of the army, yet we feel that it is not so necessary, or rather that it needs modification, when applied to an organisation such as the Medical Service. The men who are in the best position to suggest improvements and reforms in the treatment of sick and wounded are the medical officers who actually come into contact with them, and who have to carry out the arrangements for their collection, evacuation, and treatment. Under the present system of administration there is no responsible authority to whom medical men can submit suggestions or complaints without running a very serious risk of ruining their careers, at any rate from a military point of view.

In all other branches of the services except the Army Medical Service there has been a growing tendency to place younger men in positions of responsibility. Thus, a casual glance at any army list will show that many units as large even as a Division are commanded by officers whose permanent rank may not be more than that of a colonel or even a major. The older men who have been proved not to have the necessary capacity for their work have been ruthlessly removed from their commands. This tendency has not been so well marked in the Army Medical Service. Many of the most responsible positions are still held by officers who had been on the retired list before the war. In the combatant services a single unsuccessful operation spells disaster for the higher command concerned, and after every battle it is common knowledge that many senior officers have found it necessary to relinquish their commands through "ill-health." The same practice does not hold good in the Army Medical Service. Even after the medical breakdown at Ctesiphon and later, which must have been well known to the higher authorities, Surgeon General Hathaway was given another important appointment.

Though there can be no doubt that meetings of the Army Medical Advisory Board are desirable, we doubt whether that body, as at present constituted, has sufficient power and independence. The preponderance of the military element, who are necessarily subject to discipline, and therefore unable to oppose the Director General, makes it of rather less value than it might otherwise be. At a joint meeting of the Committee of Reference and the Central Medical War Committee held on the 15th August it was pointed out that a widespread feeling appeared to exist among medical men, both inside and outside the army, that the organisation of the R.A.M.C. might be improved. The meeting adopted a resolution suggesting a committee of inquiry not only into the working of the Army Medical Service in the field, but also into the working of the service in this country and into the difficult problem of supplying sufficient medical men both for the army and the civilian population. Such a committee to produce any good result must be absolutely independent and impartial. It must have the power of calling witnesses both from the higher and lower ranks of the R.A.M.C. Nor must it be limited by any narrow terms of reference. It might even be called on to consider the findings of other commissions, such as that on the medical side of the Mesopotamia operations, or of the select committee at present sitting on the recruiting question. In its findings and recommendations it would then be able to survey the whole of the work of the Army Medical Service in the past three years.

Could such a committee of inquiry be established, it might within a few months obtain a thorough grasp of the whole medical situation, both as regards this country and the various expeditionary forces. It would be in an excellent position to detect where, if anywhere, there exists any waste of medical personnel, and to suggest the necessary remedies. It might be able to show that the medical care of the civilian population and of the army are not incompatible. The serious question of the shortage of medical students might be remedied and the administration of military hospitals might be re-organised on the lines that have been so successful in civilian establishments. The Committee would be in a position to decide how far it is possible to cut down the amount of clerical and office work done by medical men, and thereby to free them for their proper work, the care and treatment of sick and wounded. By maintaining closer touch between military and civil hospitals in England, the treatment of discharged soldiers might be made more efficient from the point of view of the patient, while effecting economies in the use of medical personnel.

Whatever steps the Government may decide on, it is becoming increasingly obvious that matters must not be allowed to drift. The Central Medical War Committee have stated as their opinion that no more medical men from England and Wales could be called upon to take commissions in the army without seriously endangering the supply of doctors for the treatment of the civil community. We can only hope that before any desperate measures are taken, every precaution will be taken to ensure that the army makes the best and fullest use of the medical men it has already procured, and we feel strongly that the best way of achieving this desirable object is to submit the whole R.A.M.C. administration to the criticism of an impartial tribunal.

Passim.

ALL who are interested in Guy's Hospital will join us in congratulating the four members of the Staff who have received Brevet rank in a recent honours list. We feel sure that no four medical men can be found throughout the country who have worked harder during the last three years than Colonel Hale White, Lieut.-Colonel Fagge, Major Fawcett and Major Ormond, and who more thoroughly deserve the honours that have been bestowed upon them.

It is extremely gratifying to read that hospital ships will be no longer liable to risk from torpedoes, on condition that a Spanish naval officer is on board and guarantees that the vessel is only used for the transport of sick and wounded. There is still bound to be a certain risk from mines, but if the Germans really keep to their agreement the minds of the wounded during transit by sea ought to be relieved of much anxiety.

Sir Watson Cheyne will be a valuable addition to the House of Commons, and his maiden speech in the House produced a very favourable impression. At the present time it is important that the views and interests of the medical profession should be kept well before the Government, and we think there are few medical men who are better qualified to do so than Sir Watson Cheyne.

The battles on the Western Front go on with unabated violence in spite of bad weather conditions. Though there have been a considerable number of casualties in the R.A.M.C

recently, we are glad that so far Guy's men have been fortunate in escaping injury. In spite of what appears to be a rather gloomy outlook from the point of view of the duration of the war, we have been assured that the war is likely to be over before the end of the year. We can only hope that these optimistic opinions will be proved true.

Among the officers mentioned in a recent list of those who have rendered valuable services in connection with the war is Major H. M. Turner. When in the Falkland Island Volunteers he organised the defences of the island in case von Spee attempted a landing. Major Turner is seconded for duty with the R.A.M.C., and at present is serving as a nose, throat and ear specialist in the London District.

Psycho-analysis and War Neuroses.

By Dr. ARTHUR F. HURST.

A number of Freud's disciples have expressed their opinion that war neuroses are due to unconscious mental conflicts, mostly of a sexual character, and that they should be treated by means of psycho-analysis. The fallacies of Freud's doctrines have been so admirably and conclusively exposed by Mercier in his paper on "Psycho-analysis" in the *British Medical Journal* for December 30th, 1916, that the subject would hardly require mentioning were it not for the fact that psycho-analysis is still being used in treatment by the few followers of Freud, who happen to be in charge of British soldiers suffering from functional nervous disorders. The mental attitude of the psycho-analyst is well shown in a paper on "Functional Nerve Diseases and the Shock of Battle" by David Forsyth, who states that "the neurasthenia of civil practice is known to be the specific result of excessive onanism"! He proceeds to describe two cases of exhaustion following the stress and strain of active service, one of which his analysis showed was due to "unconscious homosexuality" combined with "anal erotism, which has played a leading part in the patient's psychical life since an attack of diarrhœa in childhood," and the other was due to "a strong Œdipus-complex"—the psycho-analyst's name for incestuous lust. I have myself come across numerous examples of the quite extraordinary conclusions reached by psycho-analysts. A soldier was blown up as he reached the beach during the Gallipoli landing, and was thrown into the sea. He recovered consciousness after artificial respiration had been carried on for a considerable time. He was sent home in an exhausted condition, but recovered rapidly and felt fit for duty shortly after he reached England. His Freudian medical officer, however, recommended that he should be discharged from the service, so that he could live again with his wife, as he had found by psycho-analysis that the symptoms were really due to unconscious lust for his mother conflicting with his love for his wife, the shell-shock and narrow escape from drowning being apparently regarded as of no importance.

I have seen a considerable number of medical case sheets of soldiers who had been in charge of psycho-analysts. In almost every case an attempt appears to have been made to discover some sexual origin of the symptoms, obvious causes such as shell-shock and the stress and strain of active service being more or less ignored. Some form of "Œdipus-complex" was suggested in many instances, simply

because the patient had occasionally slept in bed with his mother when a small child, or because her death had caused him much distress. A man sent home from France on account of epilepsy had suffered from fits when a small boy. When eight years old his parents had sent him to live with relations in California so that he could live an open-air life. The fits had become very infrequent, and he had not had one for a year and a half when he enlisted, but the stress of active service caused the fits to become more frequent again. This very straightforward case had been "analysed," with the result that the fits were said to be due to unnatural lust for his mother, whom he had not seen since he left home in 1904. The nasty ideas suggested by a sexual cross-examination and by psycho-analysis are bad enough, but I have seen still more deplorable results of the method. An unmarried sergeant, 26 years old, who was worn out and anxious as a result of unaccustomed responsibility, was slowly improving with rest and encouragement, when his "unconscious mind" was subjected to analysis. A petty larceny he had committed as a boy and had almost forgotten was raked up, and in his somewhat emotional condition it caused him acute distress. He had never felt any great sexual desire, but was told on discharge from hospital that he must indulge himself at least twice a week. He was re-admitted a month later very much worse, as his mind was torn between the reluctance he felt to follow this advice, both on account of conscientious scruples and absence of desire, and fear that disobedience would result in insanity. At the same time he had felt an almost irresistible impulse to return to the hospital to murder the analyst of his "unconscious mind." Encouragement and occupation resulted in slow improvement, but he continued to hide himself at the approach of the Freudian medical officer under whose care he had originally been.

Lastly, as an example of the psycho-analyst's explanation of war-dreams, the following interpretation by Captain M. D. Eder is quoted from his book on "War Shock." This was recently the subject of a long review in the *Daily Mail*, in which its perusal was recommended to lay as well as medical readers! The patient had served in France and the East and was admitted for physical and mental exhaustion. He dreamt he was "on a boat running out of A—— Harbour, going down the River B——. We went through a narrow passage which came gradually to a point, and got stuck in the mud. Ship did not stop. Looking out of the port-hole window I saw a Zeppelin in the distance. It was attacked by a fleet of balloons." Psycho-analysis showed that "the narrow passage stood for the vagina and the mud was the anal region; the boat coming down the passage (the vagina) was the patient himself." The balloon was his mother's womb and the Zeppelin his own phallus, "his phallus (Zeppelin) being the prey of women (balloon) which will destroy his male power." The effect of such an explanation of a very ordinary war-dream on the mind of a war-worn soldier cannot be anything but disastrous, and even Eder admits that no improvement resulted. Few will disagree with the conclusion that the sooner that psycho-analysis ceases to be practised in England the better it will be for all concerned. The symptoms which are regarded by Freud and his followers as pre-eminently the result of conflicts between repressed sexual tendencies and experiences (so-called complexes) and the general personality are common in soldiers, but their sexual life is absolutely normal, and the symptoms are directly due to the stress and shock of warfare. The unburdening of the soul, the only healthy part of Freud's teaching, is nothing new, as it has been used from time immemorial by the laity as well as by doctors for helping the distressed in mind.

Obituary.

Lieut.-Col. J. H. HORTON, D.S.O., I.M.S.

DIED ON SERVICE.

Lieut.-Col. James Henry Horton, D.S.O., I.M.S., was reported as having died on active service, in the casualty list published on August 2nd. He was born on December 27th, 1871, the son of Major J. Horton, of Woolwich, was educated at Guy's Hospital, where he gained the Arthur Durham prize in 1891, and took the diplomas of M.R.C.S. and L.R.C.P. Lond. in 1895. After filling the post of house-physician at Guy's and at the Royal Bethlem Hospital successively, he went to India as a special plague medical officer. He was one of the four plague officers who accepted commissions in the I.M.S. as lieutenant from January 29th, 1902, and while at Netley gained the Marshall Webb medal and prize. He became captain on January 29th, 1905, major on July 29th, 1913, and was specially promoted brevet lieutenant-colonel on December 21st, 1916. He served in East Africa in 1902, in the operations in Somaliland, was present in the action at Jidballi, was mentioned in dispatches (*London Gazette*, September 2nd, 1904), and gained the medal with two clasps and the D.S.O.; on the North-West Frontier of India, in the operations in the Mohmand country in 1908, medal with clasp; and as surgeon to the British Red Cross Society in the Balkan war of 1912, medal with clasp He also had the fourth class of the Order of St. George and St. Vladimir of Russia. On March 17th, 1908, he was posted as medical officer of the 14th Bengal Cavalry, and at the beginning of the present war was appointed to the command of the 126th Indian Field Ambulance

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

[We would point out that we cannot *in any circumstances* publish any letter unaccompanied by the writer's name and address, not necessarily for publication.—ED., G.H.G.]

John Wesley at Guy's and St. Thomas's Hospitals.

DEAR MR. EDITOR,—Many distinguished persons have visited the "Borough Hospitals" at different times in their history, but I was not aware until recently that there is a record of John Wesley, early in his career, having done so. In the Standard Edition of Wesley's Journals, edited by the Rev. N. Curnock, is the following entry concerning Guy's, which is transcribed from Wesley's Diary originally written in shorthand:—

> "Saturday, Dec. 6, 1740.—4½ Drest, prayer! meditated, chocolate; 6 Matt. xiii., spinners, writ for society; 11 at Sister Aspernel's, conversed! 12 at home, conversed to many, spinners, 2 at Mr. Dolman's, dinner, conversed; 3.45 at the hospital; 4 at Guy's Hospital with S. Lincoln, Mr. Chandler, prayer, conversed! tea; 5,30 visited; 6 Long Lane; 8 at home, the women, prayer; 10."

It should be mentioned that! (a note of exclamation) always indicates a special blessing in Wesley's Diary.

The visit to St. Thomas's Hospital, then, of course, in St. Thomas's Street, took place nine months after that to Guys, and it is described by St. John of England —to use the canonized title the late Mr. Stead conferred on him—in his Journal thus:—

> "Monday, Sept. 7, 1741.—I visited a young man in St. Thomas's Hospital, who, in strong pain, was praising God continually. At the desire of many of the patients, I spent a short time with them in exhortation and prayer. Oh what a harvest might there be, if any lover of souls who has time upon his hands would constantly attend these places of distress, and, with tenderness and meekness of wisdom, instruct and exhort those on whom God has laid His hands to know and improve the day of their visitation."

Wesley at the time of his visit to Guy's would be in his 38th year, and the Hospital had then been open for suffering humanity 16 years.

Did Wesley come to Guy's or St. Thomas's more than once? The instances given above, or any others, are unmentioned in the index to the Journals, which latter consist of 8 volumes; and, as I have not gone carefully through these, I am unable to say, but I think it most probable that the great man would not be content with a single visit, considering the comment he made on the good that might be done through hospital visitation.—Yours truly.

WM. WALE
(Wills Librarian, 1911–1914).

Hyndland, Glasgow.

Treatment of Blinded Men.

CLINICAL LECTURE BY ARTHUR W. ORMOND.

"Ay, in this thought is my whole life's persistence,
This is the whole conclusion of the true:
He only owns his freedom, owns existence,
Who every day must conquer her anew."

Gentlemen,—I received quite recently a letter in which occurs the following expression of opinion: "Death is much to be preferred to blindness." This view, morbid and exaggerated as I believe it to be, is one which has been urged upon me very frequently by all sorts of men and women who have questioned me about the work and the conditions of the life of those men blinded in the war who have passed through my hands.

I have had it expressed to me also by the blind themselves, but this has been rarely done and only during a passing mood when the terror of this dread affliction has become realised for the first time. Amongst the hundreds of men who have been blinded during this war, the realisation of their deprivation comes sometimes slowly and often quaintly. A splendid fellow, one of Phil Pye-Smith's men, after having been sightless for several months was present at a service in St. Paul's at which the King and Queen were present with a large number of celebrities; suddenly he burst out crying; it was the excited whisper of his comrades who kept repeating the names of various well-known people whom he could not see that first compelled him to realise that he not only could not see, but that he never would see again. That is the most tragic moment in these men's lives, that instantaneous realisation of what is gone for ever, never to return; it is then that you may help in a practical way by your knowledge of what a man totally blind can do, has done, and is doing to-day.

I need not repeat the list of the great men who have been blind and achieved greatness in spite of their blindness, but what I want to do is to point out to you some of the practical points in what may be called the treatment of blind men rather than the treatment of blindness.

First of all you must counteract the depression which overcomes a man who thinks that being blind he is done for. He is not. Your cheerfulness and encouragement may tide him over this period of depression. He will probably need reassuring as regards his future welfare, his ability to maintain his wife and children (if he has any), or if not, his chances of an independent existence, with a capacity to work, play, and live as other people.

The Pensions and Allowances granted to blinded soldiers and sailors are on a very generous scale. The Government minimum pension for those who have lost their sight in the war is 27s. 6d. a week. This rate also applies to warrant or non-commissioned officers, who, in addition, are entitled to service pensions. If not entitled to service pensions the rate for non-commissioned officers in the army varies from 30s. a week up to 37s. 6d. and 42s. 6d. for warrant officers, class 1. In addition to this minimum pension of 27s. 6d., every blinded soldier will receive from the Government an attendant allowance of 10s. a week for life, and all blinded soldiers will be recommended for this allowance if they are steady respectable men.

This makes the total pension of the well-conducted blind soldier 37s. 6d. per week for the lowest rank, rising to 52s. 6d. a week for the warrant officer. In addition to this, a further allowance of any sum not exceeding 10s. a week may be given to blinded soldiers who suffer from some form of disablement as well as blindness. A blinded soldier will also

be granted by the Government a further allowance for each child under the age of 16 at the following weekly rate :—

For a first child	5s.
For a second child ...	4s. 2d.
For a third child	3s. 4d.
For each child after the third	2s. 6d.

This allowance may be granted or continued beyond the age of 16 in certain cases.

I have used the term "blind," but if you were to ask me to define what I mean I should have some difficulty in doing so. It may interest you to know that there are men in France to-day, serving in various capacities, who have less vision than some of the men at St. Dunstan's Hostel for Blinded Soldiers. One such man is a Portuguese interpreter, and so long as he can see to get about in various billets and help the stranded foreigner to obtain what he wants, he is of practical use. As a matter of fact, he has only one eye and with that he cannot see 6/60. He lost his sight very gradually from glaucoma and has adapted himself to his necessities. Had he been a young miner, who, having enjoyed perfect vision in both eyes, was suddenly deprived of his vision to all but a similar amount, he would not, of course, have been able to carry on. Consequently you have to learn that blindness is a relative term and no definition has yet been laid down which meets all the various considerations necessary.

Blindness is, strictly speaking, the inability to distinguish light from darkness. This definition is precise, but too exclusive. As regards adults, there is at present no authoritative rule as to what persons should be regarded as practically blind. The standards adopted by philanthropic agencies are far from uniform. As used in the census, the term "blind" carries no precise meaning. This is not surprising, for the only precise definition of blindness is that which I have given above, whereas for the practical purposes of social economy and philanthropy a wider meaning must be given to the term.

In admitting men to St. Dunstan's, I judge each case on its merits, and I am influenced by the amount of sight retained, the work the man was doing before the war, and his physical and mental condition. In the old days we used to distinguish between blind children and blind adults, now we have to widen our conception and think of blindness due to disease and blindness the result of traumatism, and the main difference in these cases is, of course, one of physical fitness. Most of the soldiers are physically extremely fit. A certain number have sustained head injuries which considerably modify their capacity to undertake either strenuous, manual, or mental work, but these are the minority.

As soon as a blind soldier's wounds are healed he is sent to St. Dunstan's. This is an institution for the re-education of the soldiers and sailors blinded in this war. It is entirely the soldier's choice whether he goes there or not. If he goes, he is kept there provided his conduct is satisfactory until he is able to read, write Braille, and typewrite, and has some practical knowledge of a trade or industry, the pursuit of which will keep him occupied and will add to his pension; whatever a man is capable of earning does not in any way detract from his pension, it goes to augment it.

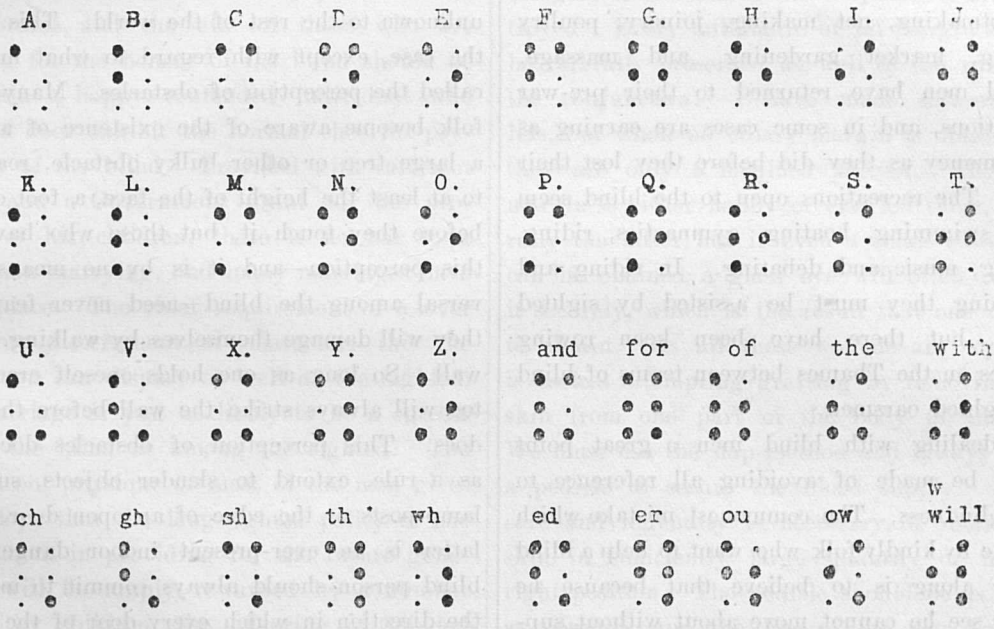
Louis Braille was born in January, 1809, at Coupvray about 23 miles from Paris. He was blinded through an accident at the age of three. In 1819 he became a pupil of the Institute Nationale des Jeunes Aveugles at Paris, and in 1826 was elected professor at the Institution, where he had distinguished himself as a pupil. As a pupil and professor he laboured to invent a system which the blind could not only read, but write in relief.

Braille is a system of embossed writing formed by using combinations of six dots arranged and numbered thus :—

1 ● ● 2
3 ● ● 4
5 ● ● 6

Each dot must be known by its number. Dots 1—2 form the top pair; dots 3—4 the middle pair; and 5—6 the lowest pair. Both in reading and writing, dots 1, 3, 5 will be found nearer the beginning of the line than dots 2, 4, 6. The possible combination of the six dots gives sixty-three simple signs. The group of six dots, which is the largest number of points that any letter can consist of, is divided into upper, middle, and lower pairs. The first ten letters, from a to j, exhaust all possible combinations of the upper and middle points. The next ten, from k to t, are formed from the first by adding a lower back point to each; thus a becomes k, b becomes l, etc. The third row is similarly formed by adding two lower points. Thus a becomes u, b becomes v, etc.

The fourth row of letters is formed from the first by adding a lower front point to each of the first row. The only letter of the ordinary alphabet in this row is w, which is derived from j, adding a lower front point. It will be observed that w comes out of its usual place in the alphabet. This is because the original French alphabet has been adhered to. W not being a letter used in genuine French words, it was originally placed the last on the fourth row, and has been there retained, as placing it out of its usual position was considered a far less evil than altering the meaning of the last four letters of the alphabet.



THE BRAILLE ALPHABET, WITH CONTRACTIONS.

The large dots represent the raised points of the Braille letter; the small simply serve to indicate their position in the group of six.

* The signs of the second, third and fourth lines are formed from those of the first by the addition of lower dots.

Braille is written in three grades: Grade 1, uncontracted; Grade 2, moderately contracted; Grade 3, more fully contracted. So that the beginner starts by writing ordinary longhand in Braille and gradually goes on to a complicated shorthand. This is the machine which is used, and it has been lent to me to show to you. It is extremely simple, and the men learn to manipulate it with the greatest ease.

Besides the reading and writing of Braille, the men are taught one or two occupations such as bootmaking, net making, joinery, poultry farming, market gardening, and massage. Several men have returned to their pre-war occupations, and in some cases are earning as much money as they did before they lost their sight. The recreations open to the blind seem to be swimming, boating, gymnastics, riding, dancing, music and debating. In riding and swimming they must be assisted by sighted people, but there have been keen rowing matches on the Thames between teams of blind and sighted oarsmen.

In dealing with blind men a great point should be made of avoiding all reference to their blindness. The commonest mistake which is made by kindly folk who want to help a blind person along is to believe that because he cannot see he cannot move about without support. A guide should realise that all a blind man needs in the way of assistance is the gentlest directing pressure.

Very few people who can see remember that a blind person can only tell who they are, and often where they are, by sense of hearing. When two sighted people, who know one another, pass, there is sure to be a nod, a smile, or a wave of the hand. To the blind these mean nothing, and the passer-by should always greet a blind acquaintance by word. Few things are more annoying to the blind than to be conscious of people without having any idea as to whether they are strangers or friends.

When a group of people, one or more blind, are engaged in conversation, its seeing members should always, if within reach, lightly touch a blind man when addressing him, if they do not mention his name, thus making up for the turned face and quick glance which form conversational signals between those who can see.

The ease and adroitness with which some blind people move are apt to lead others to think that they possess an extraordinary faculty unknown to the rest of the world. This is not the case, except with regard to what may be called the perception of obstacles. Many blind folk become aware of the existence of a wall, a large tree or other bulky obstacle, reaching to at least the height of the face, a foot or two before they touch it, but those who have not this perception—and it is by no means universal among the blind—need never fear that they will damage themselves by walking into a wall. So long as one holds oneself erect, the toe will always strike the wall before the face does. This perception of obstacles does not, as a rule, extend to slender objects, such as lamp-posts or the edge of an open door. The latter is an ever-present indoor danger. A blind person should always commit to memory the direction in which every door of the house in which he lives or is staying opens. So long as he approaches it so that it opens from him, there is nothing to fear. When approaching it so that it opens towards him, it is well to always hold the arm bent before the chest. Often, of course, the fact that the door is open will be discernible by the sense of hearing.

The special faculty which the blind are so generally believed to possess is really the result of a careful cultivation of the senses of hearing and touch. Blind people should cultivate the sense of hearing. A newly-blinded person is apt to depend far too much upon the touch and too little upon the hearing. There

are all sorts of sounds about never noticed by the sighted, but which to the blind may be full of meaning.

Brains count very considerably in helping a man to obtain compensation for his blindness, and the men who have had the benefit of a good education make more rapid strides and learn more easily than do the rougher types who have been pit hands or mill operators and whose previous education has been nil or very slight indeed. Character counts for more even than brains, and the aim of those who are working for the benefit of the blind should be to obtain a happy contended individual who can and does exhibit the normal cheerful psychology of the blind. Provided with sufficient means and a Government grant for the provision of his children, there is no bar to a blind man marrying, and many marriages have taken place. The chief requirement of a lover is a true discernment of character; this the blind man can display as well as the sighted, and marriage is just as likely to be a success among the blind as among the sighted. The magnificent physique of most of the men gives great hope that the long-sighted policy of the Government in providing for the future generation will be amply rewarded by a number of healthy children, the offspring of blinded soldiers.

There is another factor in the treatment of these men which I think important, that is, their appearance. A blind man is more likely to soil his clothes, hands, etc., and to be unconscious of spilling food, etc., over his garments, and in consequence gain the appearance of slovenliness, etc., but it is not to these points that I refer to, but rather to the disfigurement of the face, the result of wounds, torn eyelids, contracted sockets, discharging sinuses, etc. I think it of the greatest importance for blind men to be made as presentable as possible, and for this reason I advise them to submit to operative interference although in some cases the patient is quite reluctant to do so when he is told that there is no hope of his regaining any sight. I aim at restoring the socket on each side so that an artificial glass eye can be worn, and I am sure that when success ensues, as it generally does, the trouble both on my part and the patient's is amply justified.

The main difficulties in plastic operations on the face and sockets are encountered when the margins of the lids or the conjunctivæ are destroyed. Every millimetre of lid margin should be carefully preserved as well as the whole of the conjunctiva. I have made several new lids, but when no ciliary margin is obtainable, they are only a modified success. The skin margin is either flabby or else too thick, generally the latter, but if even a small cul-de-sac can be obained a glass eye will often rest in it securely, which is the result that one wishes to obtain. As all these wounds are septic it is useless attempting grafting by removing the skin from one part of the body to another. We must use the flap method and always leave a pedicle to secure the blood supply. Much care and ingenuity is necessary to obtain the skin in sufficiently large quantity or in the right position. The pedicle should be as broad as possible, and the line of the new position into which the skin is to be moved should be in a line with the main axis of the pedicle, or, in other words, the pedicle of the flap must be near to the wound and its long axis must correspond to the long axis of the wound. The flap should be taken from the skin near the pedicle. A very good plan is, previous to the operation, to cut a model of the area which is to be covered, in paper or thin celluloid and to place the model on the skin around the wound so as to get the best idea, from where to take the flap, measure its size and trace out the pedicle. I will illustrate what I mean on the black board. In all cases where you can

it is better to leave the eye *in situ*, even when it is blind and shrunken. There are, however, many reasons why a blind eye must be re-removed :—

1. Fear of sympathetic trouble. It is "fear of" because no sympathetic trouble has been recorded in this war, or perhaps it would be more accurate to say, hardly any.
2. Pain, the result of inflammation, or pain the result of adhesions; and
3. Unsightliness.

An artificial glass eye only lasts from one to two years, as the glass becomes rough and loses its polish owing to the action of the moist tissue lining the socket; it will not last as long as this, however, unless great care is taken of it. There are two reasons for wearing an artificial glass eye; first because it gives a better appearance to the face; second, because it prevents the lids falling one within the other and so irritating the delicate lining of the socket which, when inflamed, produces a discharge which is unhealthy. The glass eye should be removed night and morning and thoroughly cleaned before being re-inserted; the glass eye or a shell should be worn during the night. The socket should be washed out after the glass eye or glass shell has been removed, with warm boracic lotion or warm salt and water (half a teaspoonful of kitchen salt to half a pint of warm water) and one or two of the antiseptic drops should be put in.

The prescription for the antiseptic drops is as follows, and can be made by any chemist :—

Antiseptic Drops.

℞ Zinci Sulph. grs. ij.
Liq. Hyd. Perchlr. drms. ij.
Aq. Destil. *oz.* ij.

One or two drops to be put into the socket night and morning after it has been washed out.

The problem, then, for the blinded soldier is how to carry on, having lost one, perhaps the most useful, of his senses. He must concentrate his mental faculties on the remaining four, and he will, provided he perseveres, find that life is not only tolerable, but may be happy and productive also.

Blind men are ordinary men with like passions and possibilities to the sighted. It is only thoughtlessness, ignorance, or conceit that fails to realise this. We all are limited by some deprivation, mental, moral, or physical. The blind are rather more limited, but they have compensations, as often their sense of hearing, touch, or smell becomes more highly trained. Everybody who has visited St. Dunstan's from the King downwards expresses surprise at what has been accomplished by the men. Those of us who work there constantly have lost our sense of surprise, and accept the phenomenon as normal and expect that any ordinary blind man coming to the place and spending six to nine months there will at the end of that time be capable of earning his living, corresponding with his friends, reading the current literature, and generally keeping up with the rest of his fellowmen, and this applies to all grades, both officers and men, home and Colonials. There are failures, of course, but these have been mainly men whose injuries have not only deprived them of their sight, but also caused permanent damage to their brains. The blind have more temptations to become introspective, moody, and depressed than those to whom greater distractions are possible, and he must indeed fight hard if he would maintain his freedom from a galling dependence on others. It is our business to see to it that we only help him when our help is absolutely essential. The curse of the blind man is the too anxious and solicitous relative or friend, who sits and bemoans his fate for him, instead of assuring him that although sight may be useful, it is not essential, and, of course, he, as a resolute and capable man, is going to carry on without it.

"So let him journey through his earthly day,
Mid hustling spirits, go his self-found way.
Find torture, bliss in every forward stride
He, every moment still unsatisfied."

C. H. S.

Appointments.

R.N.M.S.

The following appointments have been made:—

Staff-Surgeon S. S. H. Shannon to the *Amphitrite*.

To be temporary Surgeons.—L. Horsley; R. L. Jones to the *Victory*, additional.

R.A.M.C.

Lieut-Col. W. T. F. Davies, D.S.O., late Imperial Light Horse, to be temporary Major.

To be temporary Captains.—W. P. H. Munden, G. E. Manning.

Temporary Lieutenants to be temporary Captains.—C. E. Bartlett, A. H. Turner.

Lieut. R. G. Oram (T.F.) to be temporary Lieutenant.

To be temporary Lieutenants.—L. D. Stamp, A. S. M. Palmer, H. M. Reeve, R. S. Roper, A. V. Ledger.

Officers relinquishing their commissions.—E.F. Clowes, H. W. Drew, C. C. Holman, B. B. Metcalfe.

Honours.

Died on Service.

Lieut.-Col. J. H. Horton, D.S.O., I.M.S.

Wounded.

Lieut.-Col. R. P. Lewis, R.A.M.C. Capt. D. C. Scott, R.A.M.C. Lieut. W. S. Kidd, R.A.M.C. (attached Manchester Regiment). Lieut. J. E. E. Robillard, R.A.M.C. (attached West Yorks Regiment). Capt. E. Evans, R.A.M.S.

C.M.G.

Temp. Lieut.-Col. W. L. W. Marshall.

A.M.S.

To be Brevet-Cols.—Lt.-Col. H. W. Webber, Lt.-Col. W. H. White.

To be Brevet.-Lieut.-Cols.—Major C. H. Fagge, Major H. Stott.

To be Brevet-Majors.—Capt. J. Fawcett. Capt. A. W. Ormond, Capt. H. Sharpe, Capt. E. G. Smith, Capt. A. Walker.

Mentioned in Despatches.

The names of the following Medical Officers are Gazetted for Distinguished Services rendered in connexion with the War.—Capt. H. G. Gibson, Hon. Lt.-Col. J. Robertson.

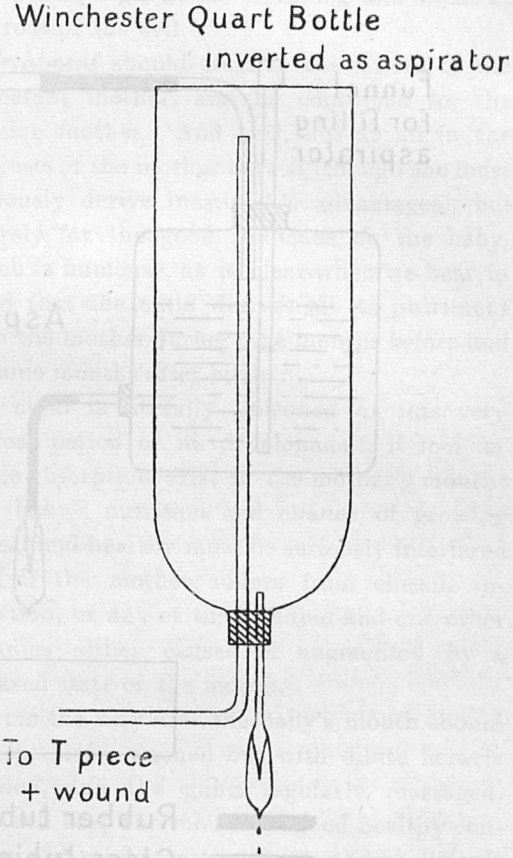
Change of Address.

E. G. Goldie. temp. Capt. R.A.M.C., 146th Field Ambulance, E.E.F.

V. E. Lloyd, Capt. R.A.M.C., 9th Batt. Suffolk Regiment, B.E.F., France.

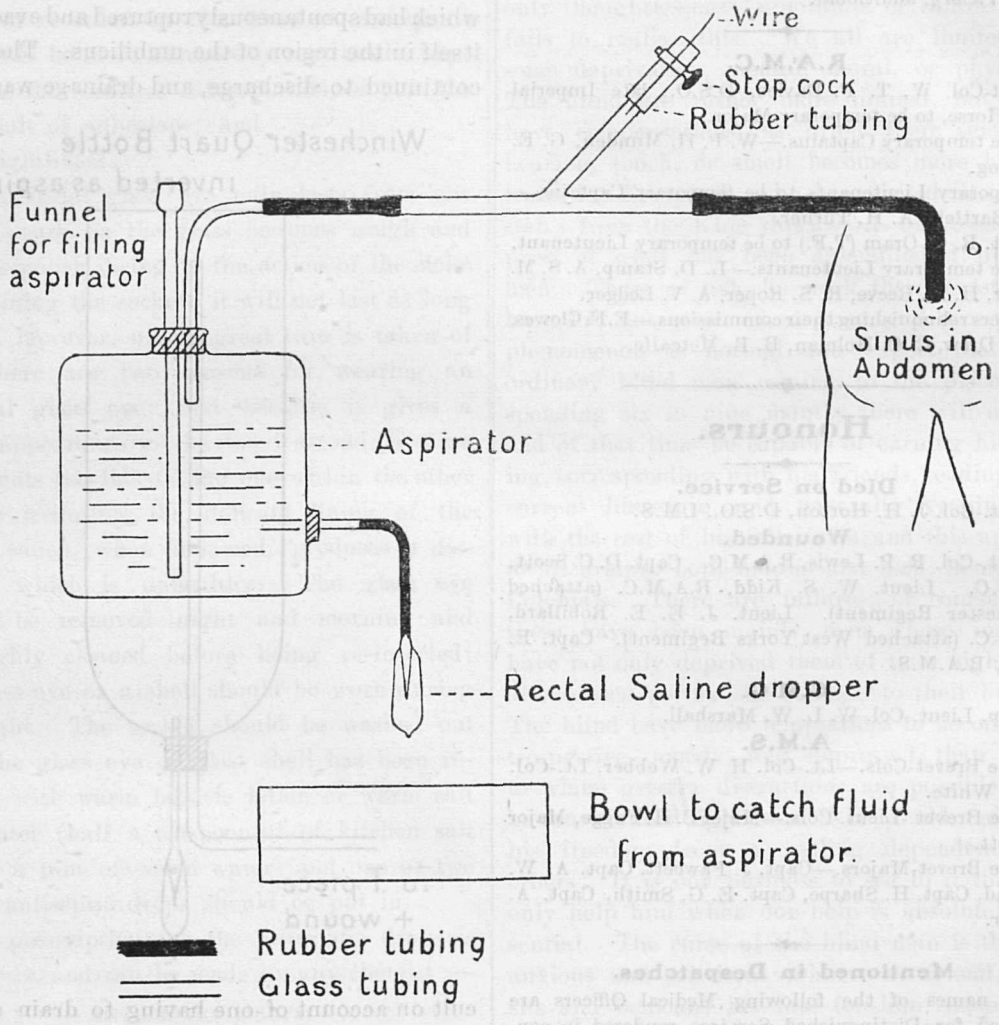
Treatment of a Tuberculous Abscess by Aspiration.

D. G., æt 17, was admitted into Dorcas Ward under Mr. Dunn for a tuberculous abscess, which had spontaneously ruptured and evacuated itself in the region of the umbilicus. The sinus continued to discharge, and drainage was difficult on account of one having to drain against the force of gravity. Routine treatment with syringing and hot baths not proving exceedingly satisfactory the following apparatus was devised. As the diagrams shew, very little apparatus beyond glass and rubber tubing is required. An aspirator, a T piece fitted with a stop-cock, and a rectal saline dropper are all that are required.



Should an aspirator be unobtainable an ordinary Winchester quart bottle will suffice. All connexions must be made air-tight, and the drainage tube which is inserted into the sinus should be preferably made of metal—rubber is apt to collapse and also to promote granulation tissue. The orifice of the sinus around the drainage should be hermetically sealed with vaseline, and then protected with a collodion dressing. When using a Winchester quart the long tube must be connected with the T piece and wound.

The T piece is provided with a piece of rubber tubing and a stop-cock. By turning the stop-cock one can regulate the flow of fluid through the aspirator and, incidentally, the amount aspirated from the cavity. A piece of copper wire is placed within the rubber tubing to prevent the rubber tube, which acts as an air-way, from becoming choked.



In principle the apparatus works as a variation of Sprengel's pump. The rubber tubing acts as an air-way as otherwise a partial vacuum is established and all joints being air-tight—no fluid will be aspirated from cavity. Two other points need attention; one is to fill the apparatus with water and close the stop-cock, if no fluid escapes then our apparatus is air-tight and

efficient, and should the apparatus become clogged with blood-clot, bleeding often occurring in these tuberculous abscess cavities, one simply disconnects the T piece and connects a funnel to the free end of drainage tube from the wound and washes out the cavity like an ordinary bladder wash-out.

I must thank Mr. Dunn for his kindness in allowing me to make the experiment of draining a tuberculous cavity by continuous aspiration, and in allowing me to publish details of the apparatus.

HERBERT BERNCASTLE.

The Importance of Dentistry in Connection with Infant Welfare Centres.

BY C. DOSWELL WALLIS, L.D.S., R.C.S.

Without doubt most people look upon Disease of the Teeth as a very trifling defect, which is largely due to the fact that this condition is so very common as to be regarded by almost everyone as normal.

This is hardly surprising when we consider that at least 90 per cent. of the entire population have defects of some sort in their teeth and mouths, and that 50 per cent. of these are of a serious nature, frequently causing injury to the general health.

Though this disease may be considered as a minor ailment, yet a greater amount of inconvenience, pain and discomfort is directly attributable to it than to any other condition; and by its remoter effects it causes more general inefficiency and economic loss than probably all other complaints put together.

This condition (Diseases of the Mouth and Teeth) may rightly be looked upon as a key disease, and as a root cause of many minor ailments and other diseases.

Early energetic treatment of any defects as they appear, systematic following-up, strict attention to oral hygiene and prophylactic measures are therefore most necessary, not only in the interests of the teeth themselves, but more especially in view of the immense influence that their condition exerts upon the general health, and (apparently) remote disorders.

To be thoroughly efficient, this care of the mouth and teeth cannot be started too soon. In this, as in many other things, we cannot do better than begin at the beginning and strike at the root of the evil.

Treatment should start in the mouth of the expectant mother, and be continued for the nursing mother. And this, not at all in the interests of the mother herself (though she must obviously derive inestimable advantages), but entirely for the good influence on the baby, which is immense, as is clear when we bear in mind that the child derives all its nutriment from the mother during nine months before and for nine months after birth.

A child is literally poisoned at this very critical period of its development, if foci for septic absorption exist in the mother's mouth; also baby's nutrition and chance of growing perfect and healthy must be seriously interfered with if the mother suffers from chronic indigestion, or any of the hundred-and-one other maladies either caused or augmented by a diseased state of the mouth.

From the very first the baby's mouth should be kept clean, washed out with dilute boracic solution, and the gums regularly massaged. This will keep the mouth in good healthy condition, and render cutting the teeth less difficult when the proper time comes for them to errupt.

Directly the teeth begin to appear they should be kept clean and used. They are intended for, and are quite capable of, dealing with hard food from the first, such as every normal child enjoys chewing. In addition, from quite an early age, the teeth should be examined by a dentist in order to detect any signs of decay or abnormalities in their initial stages, when treat-

ment can be most successfully and, as a rule, painlessly carried out.

This early care and attention can only be given by the mother, upon instruction by the Nursing Staff of an Infant Welfare Centre, under the general supervision of the Consulting Dental Surgeon. Later, commencing at the age of two years, each child should have its mouth and teeth examined at least every three months by a competent dentist skilled in this particular branch of dentistry for children, and all treatment necessary carried out as soon as any defects become apparent.

Upon the child commencing to attend school at five or six years of age, the responsibility for further dental care is passed on to the School Dental Service, which should systematically inspect, treat, and follow-up each individual till leaving school, when all further care of mouth should be passed on to a Public Dental Service of some kind. Good influence will thus be introduced into the children's lives at an impressionable age, and useful habits formed that should persist throughout life to each individual's lasting comfort and advantage.

By adopting some such thorough and systematic methods, we may hope, largely, to stamp out in future generations dental disease in its worst forms, and to do away with many of the unhealthy conditions and disastrous consequences attendant thereon, that are, alas, so common at the present time as to be regarded by nearly everyone as normal, and at the best as an unavoidable evil.

A letter from Sergt. E. W. P. Chapman

(late Storesman in Works Department), now on Active Service.

I can hardly realize that by the time you receive this letter it will be twelve months ago since I joined up. How the days and weeks do seem to flit by. They certainly do seem to do so to me, for I am kept pretty busy now. I have been up here at Baghdad ever since it was taken (although I still use the old address) as Sergt. in Charge of the Depôt. My word, though, there is plenty of work and responsibility. The weather is beginning to warm up too; for several days the thermometer has touched 110° in the shade, so you can imagine turning out very early to get work done, knocking off at 10.0 a.m. and starting again at 4.0. p.m. These are official hours, but my hours commence at daybreak and finish at sunset. Still, I am not grumbling, but I find it very tiring at times, and shall be very glad of a change. I believe I am going to get a month's furlough in India in July, and our O.C. also told me that he was putting me up for promotion to Staff-Sergt., an equivalent rank of Quarter-Master Sergt. I expect I shall hear that it is through in about a month's time.

By the way we had some very interesting times when the push took place out here last February. I was living on a barge on the Tigris for over three weeks. Good gracious, what times we had! Up here, too, we have had some funny times, but they can wait till I come back. I was not much struck by Baghdad itself. It is a place greatly over-rated, at least I think so. It is dusty, no sanitation, and more or less a glorified Basra. But the place could be made very decent, and, indeed, our people have worked wonders since they have been here.

EDGAR W. CHAPMAN.

Pass List.

Royal Colleges of Physicians of London and Surgeons of England.

As the result of the Final Examination held from July 3rd to 20th, the following candidates were approved in the under-mentioned subjects:—

Medicine.—A. Bulleid, C. G. Coombs, J. R. Cox, R. N. Craig, F. Harrington, R. J. Hearn, E. C. Hinde, N. Kamchorn, J. Kyle, H, J. Leviseur.

Midwifery.—F. Caldecott, J. R. Cox, R. N. Craig, A. R. Doyle, T. Fernandez, W. A. Flynn, W. Govea, W. H. Grace, W. A. Hawes, H. Johnson, H. O. Long, A. L, S. Payne, R. T. F. D. Roberts, A. G. M. Severn, G. A. S. Shacklock, R. C. W. Stayley.

Surgery.—F. Caldecott, L. S. Debenham.

Marriage.

CURLE—SOMERFIELD.—On Wednesday, Aug. 8th, at Southwark Cathedral, by the Rev. Charles Goodwin, Stevenage, Herts, cousin of the bridegroom, Reginald Curle, M.R.C.S. Eng., R.A.M.C., to Hilda May Somerfield.

Death.

AINLEY WALKER.—On Aug. 6th, at 29, Charlbury Road, Oxford, after a long illness, Emily Hilda, wife of Dr. E. W. Ainley Walker, the first Gordon Lecturer of Guy's Hospital, and eldest daughter of Professor and Mrs. Poulton, in her 33rd year.

J. J. C.

GUY'S HOSPITAL GAZETTE.

VOL. XXXI., No. 761.] SEPTEMBER 8, 1917. [SIXPENCE.

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Passim.

SINCE our last issue London has experienced its first night aeroplane raid. Although the noise of the engines could be plainly heard there were no bombs dropped in the neighbourhood of the Hospital, which was not called upon to treat any victims.

The raid, however, served to warn us of what might possibly prove a source of great inconvenience and confusion, were we called on to treat a large number of cases. As soon as the guns were heard, large numbers of the inhabitants of the Borough began to pour into the Hospital for refuge. Many of these found their way into the subway between the Surgery and the wards, where they formed a seething mob in the dark, which would have effectually prevented the passage of any trolley or stretcher had it been necessary to take any cases in. Later many of the refugees took up positions in the Out-Patient Hall, where they again might have proved a great inconvenience.

We feel strongly that it is time that some attempt was made to check the tendency of a panic-stricken Borough to rush the Hospital. Other London Hospitals have been called upon to treat as many as 250 patients during an air raid, and if we had to deal with anything like that number, the presence of a crowd of women and children in the Out-Patient Department and subways would lead to a total breakdown of arrangements. There should be no difficulty in arranging with the police to send all those who attempt to seek shelter in the Hospital down to the archways under London Bridge Station, where many thousands could be accommodated much more safely than in the Hospital. It may be said that it would be brutal to turn away from our doors those who come to seek shelter, but the function of the Hospital is to look after the sick and wounded, and if necessary strong measures must be taken to avoid any conditions which would diminish our powers of dealing with a crisis, should one arise, as most certainly one day it will.

A COMMITTEE has been appointed by the Secretary of State for War to inquire into the administration of the Army Medical Service both at home and abroad. The committee includes a large civilian element of distinguished physicians and surgeons, one of whom, we are glad to see, is Sir Frederick Taylor. Though the majority of them are not connected with the army they are not unacquainted with the problems which the Army Medical Service have to solve. It is to be hoped that they will be enabled to accumulate first-hand evidence of any waste in medical personnel which may exist.

GUY'S men who have been at the Hospital during the last few years will hear with great regret of the death of Captain A. Traill, who has recently been reported as having died in France. We hope in a future issue to publish an obituary notice and a photograph.

THE new roadway opposite the door of the Medical Block buildings is now practically completed. Though necessarily some portion of the grass in the Park has been sacrificed, the loss is not so serious as was anticipated. Whether the circular course is big enough for anything larger than a taxicab to turn in without reversing remains to be seen.

IN the *Lancet* of September 1st there is an interesting paper on the physiological and antiseptic action of Flavine, which contradicts the original researches of Browning and his fellow workers. According to the author, Flavine would appear to have a very deleterious effect on phagocytosis. At Guy's, Flavine has not been tried to any very considerable extent, but we are under the impression that most of those who have had an opportunity of using it think that it produces quite good results.

AT present the regulations dealing with late leave for officers in hospital seem to vary very widely in different establishments. At some hospitals officers appear to be allowed out until 10 p.m. every night of the week, while at others no late leave whatever is granted. Others again, are intermediate and allow late leave for a certain number of nights a week. Provided convalescence is sufficiently well established there seems to be no obvious reason why officers in hospital should not be given as much freedom as possible, especially in view of the fact that they are no longer allowed the long spells of sick leave which they enjoyed in the earlier years of the war.

WE hear that in addition to the presence of medical men from the United States in the Base Hospitals in France, there are now some American doctors working as Regimental Medical Officers with fighting units. This should do something to relieve the pressure on the medical profession in this country.

The Order of the British Empire.

Conferred for Services to the Empire at Home or Abroad.

The GUY'S GAZETTE is pleased to announce that the Matron of the Hospital, Miss Margaret Hogg, has been honoured by His Majesty the King by admission into the new Order.

In company with Miss Lloyd Still, Matron of St. Thomas's Hospital, Miss Luckes, Matron of the London Hospital, and Miss McIntosh, Matron of St. Bartholomew's Hospital, Miss Hogg has received the Title and Dignity of Commander of the Order of the British Empire.

These orders have been instituted for the special purpose of recognising the manifold services of British subjects and our Allies in connection with the war.

All Guy's men and women will be deeply gratified that, through Miss Hogg, their Hospital is thus specially distinguished. The large London Hospitals have sent out a splendid body of women to nurse the wounded, and in spite of administrative difficulties the training of Probationers has continued and the claims of the sick civilians safe-guarded, and this is indeed service to the Empire. Of that service Miss Hogg has taken her full share while assisting Miss Haughton, the late Matron, and since her own appointment to the Matronship of the Hospital, and the future will bring untold opportunities to maintain the best traditions of the Hospital, and the ideals and inspirations of the Order.

Obituary.

Lieut. T. F. P. T. DENNETT,

Queen's Royal West Surrey Regiment, attached R.F.C.

Lieut. T. F. P. T. Dennett was educated at the Whitgift School, Croydon, and Guy's Hospital. On the outbreak of war he joined the Surrey Yeomanry and went out to Egypt and the Dardanelles with the 29th Division. In March, 1916, he came to France, where he served for some time. In August, 1916, he returned to England to obtain a commission, and on December 19th, 1916, was gazetted to the Royal West Surrey Regiment. He was again sent to France, and was soon attached to the Flying Corps. On August 4th, 1917, he died of wounds received during a flight over the German lines. His squadron commander thought very highly of him, and he was extremely popular among all with whom he came in contact. In his work he was absolutely fearless. Though not at Guy's for very long, he was much liked by his contemporaries, to whom his death will be a source of great sorrow. We hope to publish a photograph of Lieut. Dennett in a later issue.

VICTOR HOLGATE SOWERBY.

Killed in action, August 1st, 1917.

Second Lieut. V. H. Sowerby was educated at Old Clee Grammar School, where he won a scholarship, was head of the school, and captain of the cricket and football teams. He became a student at Guy's Hospital in October, 1915, but enlisted in the London Regiment the following month, and volunteered to proceed to France early in 1916, although then only 18 years old. He was selected with a few others to act as domestic indoor guard to the King, when his Majesty spent a week in France. This was an interesting experience, and resulted in the gift of a Royal pipe as a souvenir. He remained in France and Flanders without any leave until appointed Second Lieutenant in the Lincolnshire Regiment, June, 1917, when he was granted a few days' leave. An officer writes :—

"Your son and myself were platoon commanders in the same company, and went into action together. I saw and spoke to him during the attack and just before he was wounded; then he was very cool and cheery and setting a magnificent example to his men, who all loved him, and speak highly of his excellent qualities.

"Although he had not been with the battalion long, I had come to enjoy his friendship, and can say he was very popular with officers and men.

"He received a wound in the chest, and died on his way to the dressing station."

Appointments.

R.N.M.S.

The following appointments have been made :—
Fleet-Surg. M. P. Jones to the *Vivid*.
Surg. C. H. Gould to *Research*, for Portland Hospital.
Surg. F. A. Knott to the *Achilles*.
Surg. Prob. K. J. H. Davies to the *Saracen*.

R.A.M.C.

Capt. H. J. Dear, London Regiment, to be acting Lieut.-Col. whilst in command of a battalion.

Temp. Lieut. H. Harrison to be temp. Capt.

Officers relinquishing their commissions—Temp. Capt. G. S. Miller (granted the honorary rank of Captain), and Temp. Lieut. J. Young.

Lieut. R. Cyril H. Francis, M.D., B.S., has been appointed Surgeon and Transport Officer to the 2/1 West Lancs. Field Ambulance, also Throat, Nose and Ear Surgeon to the 55th Division.

Territorial Force (R.A.M.C.)

Lieut.-Col. H. W. Webber, F.R.C.S., is seconded for duty with a General Hospital.

Civil.

Charles Edwards, M.R.C.S., L.R.C.P., has been appointed Hon. Medical Officer to the Edith Cavell Home of Rest for Nurses, Little Wych, Bridport.

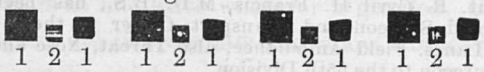
A Case of Cardiac Irregularity.

THE patient, Private X, was admitted into hospital with "Pyrexia of unknown origin," and presented no abnormal physical signs other than the disturbance of the heart's rhythm to be described.

At the first moment of examination the radial pulse was beating regularly at the rate of 100; suddenly it fell to exactly half that rate, remained so for about a minute, and returned with equal abruptness to the original pace, the phenomenon continuing to recur at irregular intervals.

So far the case might have been one of "heart block," and the pulse may be diagrammatically represented thus:—

But on listening to the heart sounds at the apex it became obvious that during the period of slowed pulse rate the heart maintained its original number of beats per minute, and that the long pause felt at the wrist was due to the failure of every alternate ventricular systole to raise the aortic valves. There was, moreover, this peculiarity about the sounds, that they were paired. First came the normal first and second sounds, then a short pause, then a feeble first sound only, this in turn being followed by a comparatively long pause, as shown in the diagram:—



Keeping a finger on the radial pulse and observing the pulsations in the neck during the slowed period, one was at once struck by a further phenomenon. The rate of the pulsations was exactly double that of the pulse rate, and their force differed regularly in its visible extent; that which corresponded to the pause at the wrist being obviously the greater.

Palpation of the carotid showed that the pulse rate here corresponded with that of the radial, and that there was no beat synchronous with the larger visible pulsation, which must therefore be due to sudden expansion of the great veins.

Finally simultaneous auscultation at the apex and observation of the waves in the neck showed this various pulsation to be synchronous with the second and feebler of the paired first sounds.

The conclusion arrived at was that every alternate heart beat was replaced by a premature contraction of *ventricular* origin, which, occurring simultaneously with the normal auricular systole, was the cause of the powerful regurgitant wave given in the waves of the neck.

C. P. S.

Change of Address.

Capt. L. Horsley, R.A.M.C., to Surg. L. Horsley, R.N., R.N. Hospital, Haslar.

Capt. C. Aldis, R.A.M.C., G.H.Q., 1st Echelon.

Lieut. O. V. Payne, R.A.M.C., from Ripon Training Centre, Blackpool, to Reinforcements, c/o D. H. S., Salonika Force.

Brev.-Lieut.-Col. C. H. Fagge, R.A.M.C., from 3, Devonshire Place, W., to 32nd C.C.S., 5th Army B.E.F.

Surg. F. C. Newman, R.N., R.N. Barracks, Chatham.

Lieut. R. C. H. Francis, M.D., B.S., L.R.C.P., M.R.C.S., 2/1 West Lancs. Field Ambulance, B.E.F.

Surg. Prob. K. J. H. Davies, H.M.S *Saracen*, G.P.O.

Surg. F. A. Knott, H.M.S. *Achilles*, c/o G.P.O., London.

Capt. F. G. Vicars, R.A.M.C., Grove Military Hospital, Tooting, S.W.

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Trench Fever and its Differential Diagnosis.

By J. ALLAN BERRY, Lieut. N.Z.M.C.

Trench Fever has been the term usually applied to cases having tibial pain and tenderness with a fever lasting a short time and recurring at varying intervals from four to thirteen days, but it is better to include a much larger group of cases, viz., those labelled as P.U.O., where no other cause for the pyrexia can be found. This will include a heterogenous collection of cases, which, however, will be found to fall into one or other of the following three distinct classes:—(1) those with simple fever and very little prostration, (2) those with fever and "shin" pain, (3) those with fever and "muscle" pain. The possibility of these being distinct diseases has to be borne in mind, but a case may start with simple fever, later develope pains in the muscles, or more accurately in the fibrous tissue, and still later develope shin pain; or the order may be reversed. It is more reasonable to assume that the signs and symptoms of these three classes are manifestations of the same organism than to assume that they are mixed infections. Cases showing the relapsing type of temperature at varying intervals are a little more frequent than the number of cases that have a continued pyrexia which may be remittent or intermittent in character.

The following diseases are those most commonly mistaken for Trench Fever:—

Influenza.—On a superficial examination most of the cases labelled as Trench Fever or P.U.O. resemble influenza, particularly in the great variation of the symptoms, but the following points of distinction showing that these terms refer to a new disease are (1) the absence of marked catarrhal symptoms, (2) the relative absence of complications, (3) the absence of prostration in the initial stages.

Cerebro-spinal meningitis.—It is sometimes difficult to distinguish this disease from Trench Fever. A patient may be admitted with every appearance of being a "fulminating" case of cerebro-spinal meningitis. There will be a history of sudden onset with vomiting, pyrexia headache and other classical symptoms of cerebro-spinal meningitis. Examination will show a positive Kernig's sign, there will be pain and tenderness in the muscles at the back of the neck, and, to complete the illusion, delirium; although, if it is a case of Trench Fever, the patient is much more likely to be perfectly rational. "Shin" tenderness, if present, will at once clinch the diagnosis. If this is absent the only means of arriving at some degree of certainty is to perform a lumbar puncture. These cases are similar to the meningismus usually present when cerebro-spinal meningitis is epidemic, generally non-fatal, but simulating the real disease in all but bacteriological findings.

Appendicitis.—Many cases were sent in as appendicitis. All the signs and symptoms of acute appendicitis will be present and an operation may confirm the diagnosis. Subsequent to the operation the temperature may not fall and it may be feared that some complications are taking place. By this time "shin" or "muscle" pain, or both together, may have developed. This continued pyrexia may lead to anxiety after wounds or surgical operations, and the possibility of Trench Fever being the explanation must always be considered. In the great majority of cases the appendicitis is not the initial symptom, but comes on later during the course of the disease, and tenderness over McBurney's point is almost constant in cases of Trench Fever, but generally subsides with the fall of temperature. The usual explanation of this is that the tenderness is in the overlying muscles. There can be no doubt that this is a factor in some cases, but the muscle tenderness is much more constant over

the region of the gall bladder and over the left hypochondrium than over the appendix. An explanation of these cases is that Trench Fever may be latent in many, and any trauma or disease such as appendicitis will light it up, as is the case with malaria.

Pneumonia.—A man may come in with all the symptoms of pneumonia. There will be the history of sudden onset, vomiting and a complaint of violent pain in the chest made much worse by the slight cough which is almost invariably present in cases of Trench Fever. The face is flushed, the breathing may be rapid, and the temperature high. On examination of the chest everything will be found to be normal.

Pleurisy is much more often simulated, but no "rub" is present. Pleurodynia is also frequently diagnosed. A patient may be sent in with this diagnosis, and by the time he has arrived at a Field Ambulance the initial pyrexia will have passed off, rendering it impossible to say whether it is really a case of pleurodynia or a manifestation of the Trench Fever organism. This pain lasts for quite a long time. The explanation of these cases is that the lower ribs, like the tibia, are affected together with the attachment of the abdominal muscles to them. On putting these muscles into action by getting the patient to raise himself from the lying to the sitting posture without using his arms, the pain will be increased. The pain is as often unilateral as bilateral.

Typhoid group.—It has been suggested that many cases of Trench Fever are really modified forms, due to inoculation, of the typhoid group of diseases. That many cases belong certainly to this category there can be no doubt, and the difficulty of distinction is greatly increased, since pain and tenderness of the shins are said to occur in cases of undoubted typhoid. A rose-coloured rash on the abdomen was also seen in a number of cases of undoubted Trench Fever. Serum agglutination tests are the only means of deciding the point, and as a matter of experience they do not seem to be a very certain guide in the early stages.

Malaria.—The great resemblance to malaria seen in the regular rises of temperature is very striking. Some cases are really malaria, and the only means of distinguishing between the two is by a blood examination. The spleen is said to be enlarged in cases of Trench Fever. I have seen no case where, when malaria was excluded, any difference could be found in the size of the spleen either by percussion or palpation.

Sand Fly Fever and Malta Fever are very similar to Trench Fever. In the former disease there is a simple fever, and the cases are very similar to the first group of Trench Fever, but there are more regular remissions of temperature, greater prostration and back pain in each of the earlier bouts. Malta Fever is excluded by the absence of agglutination tests with the micrococcus melitensis.

My thanks are due to Colonel Soltau for criticism of this paper.

Roll of Honour.

Killed in Action.

Capt. H. Ackroyd, M.C., R.A.M.C.
Capt. H. D. Eccles, R.A.M.C., att. Royal Irish Rifles.
Capt. A. Traill, R.A.M.C.
Lieut. J. H. Mayston, att. Border Regiment.
Capt. C. Weller, R,A.M.C.

Lt.-Col. J. H. Horton died in Mesopotamia.

Casualties amongst the Sons of Guy's Men.

2nd Lt. J. S. Reid, South Wales Borderers, died of wounds, the only son of Dr. E. Reid, of Swansea.

Pass List.

Society of Apothecaries of London.

At the recent examination, E. F. Deacon was approved in Medicine (Section I).

Operation for Loose Semilunar Cartilage.

BY R. P. ROWLANDS, M.S. LOND., F.R.C.S. ENG.

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A GREAT many operations have been performed for loose cartilage during the war, but the recovery of perfect function and fitness for active service has been slow in many cases. Those who supervise the after-treatment by massage, movements, and exercises tell me that they are depressed by the long duration of convalescence and disappointed with the ultimate results in some cases. These facts should lead us to consider whether sufficient care is taken in (1) the selection of cases suitable for operation; (2) the technique of the operation; and (3) the after-treatment.

I.—*The Selection of Cases Suitable for Operation.*

It is clearly of the greatest importance to be sure of the diagnosis. Therefore the symptoms, signs, and diagnosis will be briefly discussed here.

Symptoms.—The history of the original and subsequent injuries is of the greatest importance, for the detachment of a semilunar cartilage is nearly always due to *indirect violence* such as a sudden twist of the leg. The internal cartilage is commonly displaced by a sudden outward rotation with abduction of the leg at the knee-joint. Occasionally it is due to extreme flexion of the knee and the sudden attempt to get up. Generally there is severe pain and often an audible click at the moment of displacement. In many cases the patient feels the cartilage go both out and in. Often the patient has to be carried home or walks painfully on tip toe, quite unable to fully extend the knee. As a rule, effusion occurs in the first attack. Recurrent displacements are often brought on by more trifling injuries, and later still the cartilage may be displaced by slight movements, such as turning over in bed.

Signs.—When the knee is examined soon after a displacement there may be distinct tenderness over the internal cartilage, and unless the latter has gone back into place the knee cannot be fully extended, and any attempt to do this causes great pain and a tight feeling behind the knee. As a rule, more or less effusion follows for a few days or weeks.

Diagnosis.—It is very important to take pains to exclude other conditions which may simulate loose cartilage, especially osteo-arthritis. An X-ray examination often reveals changes in the articular surfaces and in the bones around. There is creaking in the joint, and other joints are commonly affected. Early tuberculosis, especially starting in the synovial membrane near the internal cartilage, is very difficult to distinguish, and radiography does not often help, but the peculiar pulpy character of the swelling with limitation of flexion, the general condition, and the history, are valuable aids in the diagnosis. Laceration of the internal lateral ligament, or partial detachment of it from the femur, may occur at the same time as displacement of the internal semilunar cartilage, but with this condition alone there is distinct local tenderness over the internal surface of the internal condyle of the femur, and sometimes there is an effusion of blood at this spot. In some cases the X-ray examination reveals an exostosis near the knee-joint either of the femur or tibia. The slipping of a tendon over one of these may cause symptoms simulating those of a loose cartilage. Also a sprain of the tendons inserted on the inner side of the tibia high up—the sartorius, semitendinosus, or gracilis—may be mistaken for loose cartilage, but the tenderness, creaking, and swelling are lower.

Radiography may indicate a new growth near the joint, especially in the centre of the head of the tibia or lower end of the femur. Such a growth may cause much pain and recurrent effusion into the knee-joint as a result of slight strains. The same method of examination may show one or more loose bodies in the joint, generally between the condyles of the femur or in the subcrural pouch of synovial membrane. A sesamoid bone near the gastrocnemius origin has often been mistaken for a loose body. Certain loose bodies such as detached fringes or pieces of articular or semilunar cartilage do not throw a shadow on the screen. In some cases an X-ray examination reveals fracture or even detachment of the spine of the tibia. As a rule, this injury is the result of extreme violence. Enlargement of the ligamenta alaria sometimes simulates loose cartilage, and so may pendulous synovial fringes in other parts of the joint. These, unfortunately, do not show with the X-rays. Detachment of the *external* semilunar cartilage is far less common, and when it does occur it is liable to be mistaken either for slipping popliteal tendon or internal semilunar. I have found it extraordinarily *movable as a whole*, and especially so in children over ten years who give no very convincing history of a definite injury. One boy could put the cartilage out and in at will during flexion and extension. A very lound click was heard at each movement, and the leg jerked laterally, while a swelling came and went away at the outer side of the patellar ligament.

Slipping of the popliteus tendon usually causes creaking and effusion further back on the outer side of the knee. Many youths, and especially young girls, develop recurrent effusion with insecurity of the knees as a result of prolonged exercise, but there is no history of locking or sudden clicking with agonising pain.

So many things may simulate loose semilunar cartilage that it is not always easy to be quite sure of it; therefore great care must be taken in gathering an accurate history, in making all necessary examinations, and in considering all the possible pitfalls. In many cases accurate diagnosis is impossible, but if the symptoms and disabilities are severe and recurrent, and due care has been taken to exclude the conditions which are not likely to be benefitted by an operation, it is wise to advise exploration. As a rule, this soon reveals a removable cause.

Indications for and against Operation.

1. It is rarely wise to operate after the first detachment, for recovery without operation is possible in these cases, unless the cartilage is actually out of place and cannot be reduced even under an anæsthetic.

2. When an anæsthetic is necessary to replace the cartilage an operation by a skilful surgeon with due care does not add materially to the risk of the patient. But under opposite or doubtful conditions it is clearly better to treat the case conservatively after the replacement. The best evidences of the persistence of the displacement are locking and inability to fully extend the knee, for when the cartilage lies between the prominent part of the condyle of the femur and the articular surface of the tibia, it is practically impossible to extend the knee to the full extent.

3. When the cartilage only causes slight symptoms, but no actual disability for work or necessary exercise, it is not advisable to operate; but

4. If frequent displacement interferes with the capacity of earning a livelihood or of taking necessary exercise, an operation should be recommended.

5. It should be urged for recurrent displacement when the patient is liable to go to risky places where a sudden detachment may land him and perhaps his fellow workers in danger.

6. For soldiers liable to active service and coming under Groups 4 and 5 an operation is necessary. The same treatment seems to me to be advisable in them for severe first displacements calling for an anæsthetic for their replacement. It is clear that under the trying conditions of active service recurrence is very liable to take place, and much time is wasted by treating such cases too conservatively. On the other hand, slight displacements causing only transient symptoms are best treated conservatively and the patient kept on home service or garrison duty.

II.—*Operation for Loose Internal Semilunar Cartilage.*

It is probable that most of the imperfect results of operation are due to errors of technique, and particularly to failure to take full advantage of a tourniquet. By using a tourniquet and making the operation bloodless the operation is made very much easier and safer, for the surgeon can see quickly what is wrong and deal with it in a few minutes. There is no need to use any sponges or to introduce anything into the knee except sterile instruments. Manipulations and undue irritation by frequent sponging, long exposure, and, above all, the escape of blood into the knee-joint are avoided. All these tend to cause synovitis and even infection, and therefore delay the after-treatment by massage, movement, and exercises. Many surgeons do not use a tourniquet at all for this operation, being afraid of bleeding into the joint after the operation. Many others remove the tourniquet towards the end of the operation in order to secure the divided blood-vessels. This is entirely unnecessary, and the tourniquet should not be removed until the wound has been accurately sewn up and the bandages firmly applied over a massive dressing. Under these circumstances there is no reason why a patient should be laid up any longer after an operation for loose cartilage than after an ordinary slipping of the cartilage—in fact, the removal of the cartilage should hasten the recovery of function.

Most of the disabilities following the operation are due to the effusion of blood or fluid in the knee as a result of (*a*) faulty technique, (*b*) various degrees of infection, and (*c*) unnatural restraint imposed upon the knee after the operation. Whenever possible the patient is made to rest his knee for two or three days before the operation, so as to lessen the effusion and congestion of the synovial membrane. The skin is carefully prepared. It is shaved, if necessary, from the middle third of the thigh to the middle third of the leg, then washed with ether, painted with tincture of iodine, and a sterile pad applied. When the patient is under the anæsthetic the leg is held up for several minutes to empty it of blood as far as possible, and then a flat rubber tourniquet is applied very tightly around the middle of the thigh. The knee is nearly semi-flexed over pillows or over the end of the table, and sterile towels are carefully arranged and secured to the thigh and leg. A vertical incision* $2\frac{1}{2}$ inches long is made over the interval between the tibia and femur, one inch internal to the ligamentum patellæ. The wound extends downwards $\frac{1}{2}$-inch below the upper border of the tibia. Sterile gauze pads are clipped to the edges of the wound before the knee-joint is opened. These leave no skin exposed. The capsule is opened freely and generally some fluid escapes. By retracting the edges of the capsule a good view is obtained of the anterior part of the internal semilunar cartilage, and any abnormality of this part can be seen at once. In many cases a tongue-shaped piece is semi-detached and

* Curved incisions trespassing on the important internal lateral ligament are to be condemned, and so are low incisions approaching the cartilage from below and giving no adequate view of the interior of the joint.

turned inwards. In others the whole of the part is loose. In others the two ends are the only parts attached, the middle portion often lying in or towards the intercondyloid notch. In some cases the cartilage looks normal, but proves unnaturally movable backwards and forwards as a whole. In a few cases the front end seems normal, but on drawing the cartilage forwards and flexing the knee a detached piece can be seen turning in from the posterior part of it. While the assistant retracts the edges of the wound the surgeon detaches the front end of the cartilage from the tibia with the knife and draws it forwards and inwards with a Mayo-Ochsner forceps, while he gradually separates the middle and posterior parts from the tibia and capsule of the joint. The separation of the posterior part is made easier by further flexion of the knee, and especially by the use of a strong blunt-ended tenotome. Nearly the whole cartilage is removed, for incomplete removal is a frequent cause of recurrence of symptoms. Unless the cartilage is at fault some other cause of the symptoms must be sought, and, if necessary, the wound prolonged upwards. In many cases the tags of the internal alar ligament are enlarged and œdematous. Sometimes they are very large, white, and hard from frequent injury. These should be removed. In some cases the anterior crucial ligament will be found to be partly detached from the tibia, with its free end frayed, obviously calling for removal. In others a fracture with detachment of part or the whole of the spine of the tibia is seen. In a few one or more loose bodies will be seen in the inter-condyloid notch or perhaps be squeezed from the sub-crureal pouch by external manipulation. Exceptionally a fracture of the articular cartilage of the femur will be seen, especially on the front. A tongue-shaped piece of the articular cartilage may flap and display the bony surface of the femur. It can be replaced so that only a linear fracture is seen, but the movements of the patella dislodge it again during active exercise. The whole flap should be removed and the edges of the gap smoothed with a sharp knife. The knee is straightened and the capsule is accurately sewn with continuous fine sterile catgut, and the skin with a continuous suture of linen thread. A sterile pad is placed on the wound and secured by a sterile gauze roll. Then a large pad of Gamgee tissue or cotton-wool is applied all around the lower third of the thigh, the knee, and the upper third of the leg, and this is bandaged firmly but not very tightly. Another thick layer of cotton-wool is applied and very firmly bandaged, taking care to leave the upper edge a little looser than the rest, in order to avoid discomfort and swelling of the knee and leg. For the same reason a cuff of wool extends both above and below the tight bandages. Then the tourniquet is removed. No splint is applied, but the knee is slightly flexed over a soft small pillow and the limb is raised on a wedge pillow.

III.—*The After-treatment.*

As a rule there is very little pain and rarely any that is not controlled by doses of aspirin gr. x. Every day from the beginning the knee is moved a little more. A hand is placed under the knee and the limb thus very gradually flexed. Then the heel is lifted up and a hand is placed on the front of the knee to straighten the latter. No pain need be elicited if this method is adopted early and gently enough. At the end of three or four days the outer bandage and layer of cotton-wool are removed and, if necessary, the inner bandage is slackened a little, but the sterile dressings are not disturbed until the end of a week when the stitches are removed. Then the patient is allowed up on a wheel chair with the leg slightly flexed. On the tenth day he is allowed to walk

about somewhat stiff-kneed, taking care to keep the diseased leg always in front of the healthy one, and to put the weight chiefly on the heel. This prevents the knee giving way. From the beginning the extensors of the knees are gently massaged, and the patient is encouraged to use these muscles and to move the knee a little more every day. The patella is moved sideways and up and down upon the femur every day. All passive movements are gentle and steady, and never sudden or jerky. At the end of a week flexion to a right angle is generally easy and comfortable. Massage of the knee-joint is not commenced before twelve days, when the wound is firmly healed. Exercises against resistance are very valuable in developing the muscles. Radiant heat and cataphoresis are often desirable, and a crêpe bandage around the knee *only* is useful for about a month. While the application of splints with delay in active movements are extremely detrimental, violent passive movements commonly cause effusion, pain, weakness, loss of confidence, and delay in recovery. Similarly, prolonged standing and fatigue from any form of active exercise in the early days delay recovery. All movements should be gentle, all exercise short of fatigue. With due care the patient is generally walking about fairly well at the end of a fortnight. Movements and power are almost perfect within a month or six weeks.

Leaves from a Medical Student's Note Book.

Infection of the Bile Passages.

Paths of infection.—Bacteria may reach the bile passages.

1. By a direct spread upwards from the duodenum along the submucous lymphatics or directly by an actual regurgitation of infected duodenal contents.

2. The portal vein drains the whole of the intestinal tract and organisms may gain access to the liver from any diseased area of intestine. Normally, the liver is able to destroy organisms arriving in this way, but when function is impaired or when septic emboli lodge in the liver, the bile passages become infected.

3. The hepatic artery may also convey organisms to the liver which are excreted in the bile.

4. The gall bladder may be directly infected by the rupture of an abscess of a viscus into it by a process of ulceration.

5. The gall bladder may be infected by a direct spread from submucous lymphatics and subserous lymphatics in the vicinity.

Organisms concerned.—The most important infecting organisms are those of the coli-typhoid group, namely, bacillus coli communis, typhoid bacillus, bacillus of Gaertner. Streptococci and staphylococci are also found. The most important consequence of bacterial infection of the bile passages is the formation of gall stones which produce obstruction and thus favour the spread of infection upwards into the liver, producing cholangitis and sometimes pancreatitis.

Although most commonly found in the gall bladder, calculi may form in the cystic duct or in the right and left hepatic ducts; they then pass into the common duct and may lodge in the ampulla of Vater, or pass into the intestine through the ampulla; they may ulcerate into the duodenum or more rarely into the colon.

Large stones may give rise to intestinal obstruction; they usually lodge about one foot above the ileo-cæcal valve, the narrowest part of the small intestine.

Stones formed in the cystic and common ducts have generally the shape of date stones. Those in the gall bladder and saccular dilatations of the ducts are usually spherical in form

and when packed closely together are facetted. The nucleus of a gall-stone consists of epithelial debris containing organisms surrounded by cholesterin and bilirubin calcium in varying amounts. It must be borne in mind that gall stones are frequently found post-mortem in cases in which there had been no symptoms during life.

In acute cholecystitis the gall bladder is enlarged, the mucous membrane is inflamed, and the normal rugæ are absent. The inflammation may spread to the peritoneal coat and ulceration may occur. The gall bladder may contain more or less altered bile and mucus or pus.

The distension may be followed by ulceration or rupture (a) into the peritoneum, (b) into the intestine, (c) into the pelvis of the kidney, (d) through the skin. Perinephric and subphrenic abscesses may form. The umbilicus is the commonest place of rupture. Empyema of the gall bladder caused by the invasion of the bacillus coli is not always preceded by gall stones.

In the course of typhoid fever the gall bladder may become infected and distended. It may either discharge spontaneously or suppuration may spread through its walls and cause ulceration and perforation. The gall bladder contains typhoid bacilli in "carriers," which persist for many years after infection.

The cystic duct, hepatic, or common bile ducts may become obstructed by inspissated mucus or by the impaction of a calculus. When the obstruction is in the cystic duct there is distension of the gall bladder, but no jaundice. When the hepatic duct is obstructed there is jaundice, but no distension of the gall bladder. With common duct obstruction there is jaundice and distension of the duct above, but the gall bladder is not distended because this is already affected by chronic inflammation, and is therefore contracted and thickened.

Spread of infection up the hepatic ducts causes rigors and fever from cholangitis, and if suppuration occurs septic cholangitis and pylephebitis result.

Malignant disease results from prolonged irritation by a stone, and a gall bladder thickened and contracted by chronic inflammation is best removed owing to the risk of the supervention of malignant disease.

W. E. T.

Early Attempts at a Radical Cure of Hernia.

AN account of early attempts to cure hernia may, perhaps, be of some interest. The author and date of the manuscript is uncertain, but the date is thought by Sir William Osler to be late 18th or early 19th century. The book of surgery by Chiriorris cannot at present be traced. The manuscript itself is rather badly written and in places has been difficult to decipher. The cure would appear to have been prolonged and painful.

The following is a transcription of the manuscript; asterisks denote words that cannot be deciphered :—

The following is the True Secret method of curing Ruptures or Broken Bellies in old or young of either sex, of the Navel or Groin.

I shall first begin with the account of all the remedies and other things necessary for the cure and then proceed to give Directions how to apply the whole.

The Receipt of the powders.

COMPHERY ROOT WELL CLEANED AND DRYD ...	4 ounce.
OF THE BEST ANISEEDS...	1 ounce.
TORMENTAL BAR ROOT OAK BARK WELL SCRAPED DOGBERRY BRAMBLE ...	1 ounce and half.
CAMMOMILE FLOWERS ... RED RAPE LEAVES ... SENTRY TOPS... ... ... ST. JOHN'S WORT ... ... SPEAR GRASS... ... ... BUTTER BURR ROOT ... MELLIOLET ... ... MOUNTAIN FLAX ... ... WORMWOOD	2 ounces.
PURGING LAWREL	half an ounce.

and in case this powder doth not purge the patient two or three times you may add a little Alloways with some sugar Candy.

All these ingredients must be well dryd and pounded and passed through a fine Search. The dope for a man is the quantity that wil Lye on a Shilling, taken in any cold liquid, Night and Morning. These powders must be given Some days before you begin the patient as well as during the Cure, and also after your cure for some time leaving out the purgation judiciously. Which powders will not only empty the Gut out in a few days, will contract and strengthen the inward parts, and if the Gutt is easily to be reduced with your hand you must apply a Roler with linin compress to keep it up in its place. Thus take three yards of Bays and tear it into three Rolers turn up one end about three inches and sew it firmly, placing the loop end next the Rupture on the upper part of the body round the belly putting the other through the loop, which must be on that side where the rupture is, drawing the same very tight, passing the roller under the Buttock, bringing it over the linin compress laid upon the Rupture or Ring through which the Gutt did pass, then put the end of your roller upon the belly and bring it straight down again over the compress pulling the same well down to the top of the compress so as to well secure them, then pass the roler under the contrary Thigh bringing it round the body, tucking it backwards and forwards Secundum Artem, securing the dressings at all times tight and firm.

But if you find the Gutt will not easily reduce with your hand, though perhaps it may not adhere to the Testicle or Scrotum, you must then not only purge the patient well with the powders but must also apply frequent hot poultices to the part made of Oxe's Dung fryd in Oil of Violets or Oil of Hemp seed, which with the gentle assistance of your hand will soon reduce the Gutt.

But if you are convinced that the Gutt does adhere to the Testicle or the Scrotum you must in that case have recourse to the knife before you can reduce the Gutt, but this very seldom happens.

Next follows the account of the other things, as Plasters, etc., necessary for the cure.

You must have a Razor to shave the part. You must have a black lead pencil to mark round the ring through which the Gutt passes. You must have a good sticking plaster spread upon linin to guard the adjacent parts from the Caustick. You must have a bottle of Lapis Infernalis reduced to a powder. You must have a small instrument to scarify the Scarr. You must have a good Stiptick powder or some good Stiptick in case of need, for some times it happens that a blood vessel is touched, nay even an artery, whereby is occasioned a great Effusion of blood, and indeed the patient ought to be furnished with the same with directions to use it if there should be occasion in your absence.

You must have a bottle of Oil of Vitriol. You must have good store of linin rags with leather for plasters

You must have a bottle of the fine yellow flower of the best mustard seed on the virtue of which the greatest dependance of this notable Cure consists. It is made thus. Take a quart of the best mustard seed lett it be well dried and ground very fine, then pass it through a fine Search and keep the fine for use.

You must have a Role of the best * * * , a Role of Excrofin a Role of Adher. iam. You must have a box of ferns and burnt allum.

A receipt how to make the main plaster which we call the Specific Plaster. Take two ounces of P * * and as much of the flower of mustard seed or at least so much as the plaster will bear not to make it too thin, mix them exceeding well togetther and spread it pretty thick upon a piece of leather. This plaster causes a large Seperation, throws off the Escharr, and at the same time inflames and contracts all the relaxt parts and in short is what fully completes the Cure, for without this plaster all attempts to this cure are vain and fruitless as to a grown person. An infant is cured by a good bandage and such of the powder ingredients as are given in its food.

Here follows the method how to use and apply the aforesaid remedies, etc., in performance of the cure of a rupture.

Having first well reduced the Gutt as afore you must with the utmost care imaginable mark with your black lead pencil a Circle exactly round the ring through which the Gutt passes which is known first by your skill of the structure of the part and next of by examining the same with your fingers.

Then you take your sticking garding plaster and cut a hole in the middle of it the bigness of the ring you have marked out, laying on the same conformable thereto, the patient being at this time in bed, you are then to put on as much of your Lapis Infernalis as will lye upon a six-pence, putting a piece of the sticking plaster over the same, letting it lye continue for an hour or two.

Then you are to take it off and clean the part well, laying on a plaster of Excropium and * * * mixt together, with good linin compress and the proper bandage well applied as before mentioned until the next day. The next dressing is thus. You must Scarifie gently the black Scarr and apply in the said Scarification more of the caustic powder, laying a sticking plaster over the same to prevent the caustic fretting any adjacent part, bandaging up the same with good compresses as before.

And so in this manner you are to proceed from day to day untill you have reason to believe you have gone as deep as you can with safety to the patients welfare, for great care must be taken not to burn the Gutt nor damage the Seminal Vesicles nor open a blood vessel or artery, so that it is held more prudent to leave of Sinking down the flesh too soon, which may easily be amended by more of the caustic powder afterwards, than by committing a blunder in being too bold at first, which may prove very troublesome. Note it is judged that four or five of these dressing is generally sufficient, but some

farther allowance may be given if the patient is very thick of fat.

Then after these dressings are over you are to apply the Main Specificke plaster before mentioned viz. the * * mixt well with the flower of mustard seed, which will not only throw off the Escarr expeditiously by its being dressed therewith every day but will also inflame and contract the relaxt parts, causing a plentiful Supperation during these dressings. But if you do observe you have not gone deep enough with your caustic, that is to say have not eaten off the flesh so as in a manner to perceive the dilated part of the peritoneum, then before your Escarr is quite thrown off apply some more of your caustic powder by a small quantity at a time for fear of damaging the Gutt, applying your Specifick plaster with good bandages and compress all the time. Note you must during the time of sinking the ulcer down to the ring apply into the same, the better to keep it from closing up too fast upon you, proper linin pledgitts into the ulcer under your plaster, which must also be well dried with the specific plaster.

And after you have obtained by this method a large clean ulcer you are then to mix the Specifick plaster with as much Oxicrafinum and as much Adhernum, laying it on very thick on the middle of the plaster, laying on the outside of the plaster some hard round sort of button to press in the plaster the better to the bottom of the wound, so that by degrees with these dressings the ulcer will close incarn and cicatrise with the assistance of a little Allum and white lead. During the part incarning the patient must drink every morning a glass of red wine sharpened with Oil of Vitriol, and frequently take of the powders and must also wear some months after upon the part a plaster of Adhernium with some proper bandage or other support untill all parts are completely strengthened.

And the better to enform your judgment of the true nature of Hernia I refferr you to Chiriorris book of Surgery and other proper books as also to your seeing dissections.

A Guy's Man in Damaraland.*

WE have received a most interesting account by Captain H. F. B. Walker of the military operations undertaken by the South African Government in West Africa. Early in 1915 Dr. Walker offered his services to General Botha, and was appointed to one of the Mounted Brigade Field Ambulances. He sailed from Cape Town on March 11th, 1915, and after a short stay at Walfisch Bay, arrived at Swakumund. Dr. Walker gives a most graphic description of the hardships of the campaign. The great difficulty throughout appeared to be that the Boers got far ahead of their transport arrangements. Though the actual fighting does not appear to have been as dangerous or unpleasant as in other theatres of war, the constant shortage of food and water made the campaign a particularly trying one. Captain Walker eventually arrived with his ambulance at the capital, Windhuk, and after the final surrender of the German forces succeeded in returning home by train and sea. The book is illustrated by a number of excellent photographs and a sketch map. The only criticism that can be made is that the nature of the operations could have been better understood had a rather larger map been included.

The transport of the Field Ambulance consisted of motor ambulances of American make and horse-drawn vehicles. Neither of these forms of transport were without their disadvantages, for the motors frequently stuck in the sand, while it was often difficult to provide water and forage for animals. The Boers appear to have behaved with the utmost consideration for the civilian population, and often went short of supplies themselves in order to save the former from starvation. In spite of the fact that his ambulance was nearly always well behind the fighting, Dr. Walker has managed to give a very clear account of the military operations.

*"A Doctor's Diary in Damaraland." By Dr. H. F. B. Walker, late Captain R.A.M.C. Published by Edward Arnold, London, 1917.

Honours for Guy's Nurses.

Miss E. Margaret Fox, Matron-in-Charge British Red Cross Unit to Russia (Dr. Clemow's), has been awarded the Russian Military Medal of St. George, 1st Class, for tending the wounded and assisting in their removal during a severe air raid at Ismail. Miss Fox, it will be remembered, was also the recipient of the Royal Red Cross of Greece during the Græco-Turkish War of 1897. She was a Sister at Guy's from 1897–99,

Honours.

D S.O.

Temp. Capt. (acting Lt.-Col.) C. D. Pye-Smith, M.C., R.A.M.C. For conspicuous gallantry and devotion to duty. When in charge of an advanced dressing station, his sergeant-major and the whole of his staff were killed. He re-organised the work with the assistance of a lance-corporal, and in consequence of his energy and presence of mind the work was not delayed. He led his bearers continually into the front line, rescuing wounded under heavy shell-fire, and working with great heroism for 60 hours, setting a splendid example to all.

Bar to Military Cross.

Temp. Capt. E. H. Griffin, M.C., R.A.M.C. For conspicuous gallantry and devotion to duty. He showed the greatest gallantry in rescuing the wounded men by night from "No Man's Land," where they had lain since dawn. He worked for hours under heavy and continued shell-fire directing the bearers, encouraging, and personally assisting the wounded, thereby enabling a large number of men to get back into the lines. Whilst thus employed he went through the enemy's wire to within 60 yards of his position. His work has been excellent since he came out in 1914.

Capt. C A Wood, M.C., I.M.S.

Military Cross.

Capt. John Cook, R.A.M.C. For conspicuous gallantry and devotion to duty. He went out under heavy shell-fire, attended to the wounded, carrying them to cover, and setting a fine example of fearlessness and devotion.

Capt. H. J. Smith, R.A.M.C. For conspicuous gallantry and devotion to duty. He followed his battalion in the attack, and attended to the wounded all day and night under very heavy fire of every description. It was due to his courage and splendid devotion that so many of the wounded were brought in.

Mentioned in Despatches.

R.A.M.C.

The names of the following Medical Officers are mentioned in a despatch, dated from the War Office August 15th, 1917, received from Lieut.-Gen. Sir Stanley Maude, K.C.B., Commander-in-Chief of the Mesopotamia Expeditionary Force; Capt. A. L. George; Temp. Lieut. L. W, Evans.

I.M.S.

Capt. C. H. Reinhold, Capt. P. S. Mills.

Reviews, etc.

Handbook of Anatomy.—The Second Edition of Margaret E. Bjorkegren's Handbook of Anatomy. Published by Baillière, Tindall & Cox, 8, Henrietta Street, Covent Garden. Should be a useful textbook for students studying Massage.,

It deals with the subject in a clear and concise manner. Although brief, it covers the syllabus for the Examination of the Incorporated Society of Trained Masseuses. The diagrams of bones are quite clear, but those of blood vessels and nerves, etc., could be more distinct by the use of coloured plates.

The chapter dealing with surface markings of the body is a useful addition, the use of diagrams to attract the eye would make it of much more value. It is suggested that the "Introduction" is hardly adequate, especially for students studying Swedish Remedial Exercises.

Staying the Plague. By N. Bishop Harman, F.R.C.S. (Methuen's Health Series). Published by Methuen & Co., London. Price 1s. net.

This small book on the problem of Venereal Disease is written for the general public. Without being technical it goes into the subject thoroughly. Perhaps the most valuable chapter is that in which the recommendations of the Royal Commission are summarised. Though it is not likely to be much read by medical men the book is one which summarises well the venereal question from the point of view of the general health of the country

I.K. Therapy in Tuberculosis. By Hiver Robertson. Published by Baillière, Tindall and Cox, London. Price 5s. net.

The author explains the meaning of the letters I. K. which refer to certain immune bodies present in the blood of rabbits after the intramuscular injection of living tubercle bacilli. The bodies in question are chiefly antitoxins and bacteriolysins, and given in minute doses render animals immune to living tubercle bacilli injected at a later date in numbers sufficient to kill control animals. The laboratory experiments are amply discussed, and also the dosage and methods of administration to human subjects. A lengthy review is made of all the published results of clinical workers who have used the method. Their conclusions are widely divergent. Some hail I.K. as a potent remedy even in advanced phthisis. Others regard it as dangerous, whilst the majority fail to observe any influence either for good or evil.

The latter half of the book is devoted to a description of forty-one patients treated by the author. It is very difficult to detect in the case sheets any effects which can be ascribed unreservedly ty the action of I.K., and full support is given to the author's opinion that I.K. is not at present of proven therapeutic value in tuberculosis, although this possibly may be due to our inadequate

knowledge of the correct methods of administration. The book affords an excellent guide to anyone interested in the subject, and copious references to the literature are given.

A Manual of Practical X-Ray Work. By Arthur & Muir. pp. 351. Heineman.

The second edition of this work maintains the same sphere of usefulness as did the first. The first half of the book deals almost exclusively with the actual apparatus now in the hands of X-Ray experts, and as such is quite outside the range of the ordinary medical man, although one cannot deny the value of this information to men about to install Field X-Ray Stations. The chapter on Diagnosis is distinctly disappointing, the authors adopting the attitude that conditions like Gumma, Tubercle, end new growths of the bone which depend upon relative density of the bone for their diagnosis, can only be recognised by those who have had years of experience with the normal, or what may be called the normal abnormalities met with in Radiography. The part of the work dealing with the X-Ray appearances of the thorax are well worth general readers attention, because experience has shown that the X-Ray expert is not by any means an infallible diagnostician, and it is well for the physician to have an estimate of what really constitutes an abnormal degree of mottling in radiographs of the Apices.

The book is brought to a close with several chapters on the Therapeutic uses of X-Rays. In common with all other books the treatment of ringworm by these means is described in much detail, and although several conditions either permanently or temporarily benefited by the application of these rays are discussed, the discussion is too brief and too reminiscent of a note book to make an appeal to the reader. The book is well illustrated throughout, but the illustrations vary a good deal in merit. While admitting the loss of definition necessarily following on printing, it seems odd that the diagrams of the thorax show what they are intended to so much more distinctly than do those dealing with diseases of the bones. For the man about to furnish himself with an X-Ray plant the book is excellent for its mass of technical detail, but to the man whose chief want is a knowledge of what the radiographer can really do for him it is somewhat disappointing.

Blood Pictures. By Cecil Price-Jones, M.B. Published by John Wright & Sons, Ltd., Bristol. Price 6s. 6d. net.

This is a small book of some 90 pages, which deals with methods of blood examination and the significance of blood pictures in disease. No attempt is made to enter into the clinical features of the diseases in which the blood picture is discussed, but a clear account is given of the blood pictures, not only in the "blood diseases," but in the more common infections such as pneumonia, typhoid, and other coccal and bacillary infections, and also in neoplastic conditions. Though there is nothing strikingly new or original in the book we think it will prove extremely useful to students and practitioners who have not time to study the larger works on hæmatology. With the aid of the excellent coloured plates, which illustrate tho book, it should be easy for anyone to grasp the main facts of clinical hæmatology without being confused by masses of detail. We have no hesitation in recommending the work to all students, and to those practitioners who are not already fully conversant with the subject.

A Laboratory Manual of Organic Chemistry for Medical Students. By Matthew Steel, Ph. D, Published by John Wiley & Sons, New York, and Messrs. Chapman & Hall, Ltd., London. Price 6s. net.

This book is intended for the use of those studying practical organic chemistry. Full instructions are given for the performance of the experiments, and the book is interleaved with blank pages in order to enable the student to make additional notes. There are two useful chapters on the alkaloids and proteins. The book is very thorough and admirably adapted for the use of medical students in the earlier years of their studies.

The Practitioner's Pocket Pharmacology and Formulary. By L. Freyberger, M.R.C.P., M.R.C.S. Published by William Heinemann, London. Price 12s. 6d. net.

This is a book of some 500 pages, but which, owing to the thin paper on which it is printed, occupies very little space. It contains an alphabetically arranged list of all the drugs and preparations of the pharmacopœias of Great Britian and of the United States. In addition to the doses a short account of the properties of the drugs are included, besides the indications and contra-indications for their use. With the more potent remedies the "maximum dose" and the "mininum fatal dose" is given. There are also references to the effects of overdoses of drugs and the measures which should be adopted to combat the same. When necessary there is some information as to "incompatibles."

Needless to say the book does not aim at supplanting the standard works on pharmacology and therapeutics, but we have no doubt that it will prove exceedingly useful to students and practitioners, who will be able quickly to verify the preparations and uses of any drug from its pages.

Birth.

KILLPACK.—On Aug. 29th, at Hayward's Heath, the the wife (*née* Gimson) of C. D. Killpack, M.R.C.S., of a son.

Death.

REID.—John Shute, 2nd Lieut. South Wales Borderers, attached to 87th T.M.B., only son of Dr. Edgar Reid, Major R.A.M.C. (T.), of Swansea, died on the 17th August from wounds received the previous day while leading his gun-team into action, aged 20.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Medical Education.

THE education which a medical student has to undergo before he can become a registered medical practitioner is probably one of the longest and most expensive forms of education for any profession. The official minimum time which has to be devoted to the medical man's training is five years, and the average duration of the course is probably nearer six than five years for most students. Even when he has obtained his qualification the medical man has not finished his education, for few men venture to embark on private practice without first doing qualified appointments in the wards of a hospital. Taking the cost even at a moderate figure, very few men, unless aided by scholarships, can qualify under an inclusive cost of between £800 and £1,000.

When the full effects of the war are felt on the incomes of the classes whose sons have hitherto filled the ranks of medical students, it will be surprising if many men can be found who can afford the time or the capital required for a medical education. We may, therefore, confidently anticipate that for some years the medical schools will be relatively empty. Quite apart from the question of finance there is another aspect in the matter. For the past year and a half all boys on reaching the age of 18 have been called up for military service, and if the war continues for many more years there will be very little chance of any of those who have grown old in military service taking up so long and arduous a course of study as that required for a medical degree.

The difficulty is one in which it is not easy to find a solution. In a leading article the *Lancet* attempts to deal with it by suggesting that more facilities for studying science should be offered to boys at school from the age of 16 upwards. By early specialisation on subjects such as chemistry, physics, and biology, medical students could begin straight away on anatomy and physiology, without having to spend the first years of their medical curriculum on the study of the more theoretical side of science.

To any such scheme there are obvious objections. The medical student is, in his later days, certainly far more closely bound up in his work than the student of law, or any other profession, and it is essential that so far as possible he should obtain the advantages of a more general education as long as he can. If the *Lancet's* suggestion were adopted it practically means that in the years from 16 to 19 general education is to be subordinated to specialism. Further, very few boys before the age of 18

or 19 can really make up their minds whether they wish to take up medicine as a profession. Were the medical course to commence as early as 16 or 17 there can be little doubt that it would greatly add to the numbers of those who fall by the wayside before reaching the goal of qualification. Others, again, might find themselves well embarked on their studies only to discover that the practice of medicine is not one for which they feel they have any natural inclination. For such a one a difficult problem arises. Either he must throw up medicine and feel that he has wasted several years of specialised training, or continue his studies against his inclinations and interests. Either of these alternatives is highly undesirable, and if an earlier start in professional studies is likely to place more students in this unenviable position, it is surely better to devote rather longer to general education, until such time as the student is capable of deciding for himself what profession he wishes to take up.

It is possible, indeed, that the length of the course of medical study might be slightly diminished without much detriment to the ultimate result. For instance, the subject of botany, which still forms part of the curriculum, is a branch of science which bears no very close relationship to medicine now that it is no longer necessary for a medical man personally to cull the herbs for his medicines. The recollections of most qualified men of their botanical studies are confined to a vague remembrance of a few technical terms. Similarly, perhaps, the courses in chemistry and physics comprise rather more than it is necessary for a medical man to know.

But, however much we may attempt to cut down the length of time spent in preliminary scientific subjects, it is very doubtful whether it would be possible to diminish the average length of the curriculum to anything under five years. If the result of the war is to be that there is such a diminution of medical students that the supply of medical men falls short, such a disaster must be avoided by any possible means. The only obvious course is for the State to step in and subsidise the medical schools, in order to enable fees to be cut down. An ample supply of medical practitioners is necessary for the general welfare quite as much in times of peace as in those of war, and it should be possible for a comparatively trifling outlay to diminish to a considerable extent the cost of a medical education. We do not for a moment advocate the establishment of State-controlled medical schools, though naturally grants from the public funds would necessitate some right of inspection by a government department. To a certain extent the principle involved has already been conceded, and some medical schools are already in receipt of grants from the Board of Education.

Passim.

SINCE our last issue the much-coveted Victoria Cross has been awarded to a Guy's man, Captain H. Ackroyd, who, we regret to say, was recently killed in action. Captain Ackroyd qualified at Guy's in 1903, and joined the R.A.M.C. in February, 1916. He had previously been awarded the Military Cross and had been wounded once.

THOUGH "summer time" may have great advantages in giving us longer hours of daylight in the evening, there can be no doubt that its effect on the children in large towns is extremely bad. Those who live in the College know only too well that the streets in the Borough are crowded with shouting children until it is dark. It is not uncommon in summer to see children from three years old upwards still at play until ten o'clock at night.

In the *Lancet* of Sept. 15th, Sir David Bruce has published an analysis of cases of Tetanus treated in hospitals in England during the last three months of 1916. His paper seems to show that the incubation period has tended to become longer. The evidence in regard to the therapeutic effect of antitoxic serum is still inconclusive.

Obituary.

Capt. A. TRAILL, R.A.M.C.

Captain Anthony Traill was the second son of Mr. and Mrs. E. B. Traill, of Pelmarsh, Essex. He was born near Dublin on July 1st, 1890, and was educated at Charterhouse and New College, Oxford. At the latter place he became President of the Oxford University Lawn Tennis Club, and won the Challenge Cup. While at Oxford he began his medical studies, and after passing the first M.B. examination, came up to Guy's Hospital. After qualification he held the appointment of Assistant House-Surgeon to Mr. Rowlands, and quickly made his name as a most promising operator. On the termination of his appointment he joined the R.A.M.C., and was for some months employed in training recruits at R.A.M.C. depôts at Aldershot and Blackpool. In the spring of 1917 he was sent out to France. While at Oxford he had a severe attack of hæmorrhage caused by a duodenal ulcer, and a recurrence of this trouble when with his regiment at the front was the cause of his death at the age of 27.

His life was one of great promise, and all who knew him looked for him to excel in his profession. Both at Oxford and at the Hospital Captain Traill was extremely popular. He was intensely interested in his professional work and an extremely quick and able operator. Though he did not serve for very long in France, he did a great deal of valuable work in training depôts in this country at a time when the training of recruits was a more urgent necessity than the provision of medical officers for service at the front.

A Case ot Mesenteric Thrombosis.

J. Y., æt. 53, was employed in a munition works. Coming from work he trod on some "acid cake," causing a soft corn on his left foot to inflame. A nasty suppurating wound on the dorsum of the left foot resulted, but this improved under the usual treatment. Three weeks after the injury he was able to walk about, but complained of vague abdominal pains, which I attributed to gastric disturbance. While relieving his bowels he was found in a collapsed condition on the w.c., almost pulseless, and died the next day from hæmorrhage. I thought the probable cause of death was hæmorrhage from a ruptured duodenal ulcer, thinking the acid burn on the foot or inhalation of nitrous fumes might have accounted for it.

Dr. Ward, of Guy's, made a careful post-mortem, and the cause of death was found to be thrombosis of the mesenteric veins. No ulcer could be found, but there was a general oozing of blood from several feet of the upper part of the jejunum, commencing about three feet below the duodenum. All the other abdominal organs were quite healthy.

According to Osler, mesenteric thrombosis occurs in individuals in whom no predisposing conditions exist. When the mesenteric vessels are blocked by thrombi, infarction follows in the part supplied—peritonitis and perforation. Veins may be primary, following infective processes in the intestine—cachexia and arterial emboli. Acute cases occur with colic, nausea, vomiting, bloody discharge resembling acute obstruction. The diagnosis is extremely difficult.

S. G. FLOYD, M.D.

The Commoner Irregularities of the Heart.

CLINICAL LECTURE BY DR. E. P. POULTON.

GENTLEMEN,—The heart beat originates in the sino-auricular node or pace-maker. It consists of muscle fibres smaller than those of the auricle, and lies at the junction of the free border of the right auricular appendix and the termination of the superior vena cava, running along the sulcus terminalis. From this excitable mass of tissue impulses pass out all over the auricle, causing its contraction.

The auriculo-ventricular node is situated in the right auricle near the coronary sinus and at the base of the septum, and is to be regarded as the collecting station of impulses from the auricle for transmission along the auriculo-ventricular bundle to the ventricle. The auriculo-ventricular bundle starts from this node and runs to the pars membranacea septi of the ventricles. Here it divides into two branches, right and left,, the latter passing through the septum at this point. Both these main branches pass down on each side of the septum and break up into numerous smaller branches which run beneath the endocardium along the columnæ carneæ, and become continuous with the extensive network of Purkinje fibres which line the greater part of the interior of both ventricles. There is a good deal of evidence that the impulse passes rapidly down the bundle, spreading almost simultaneously throughout the Purkinje network, all over the ventricles, and that the chief delay occurs in passing at right angles through the ventricular wall to the outside.

Two different methods have been employed for investigating the production of the heart beat. In the first, by means of the polygraph, the jugular pulse, and an arterial pulse such as the radial, are taken simultaneously and compared. The best way of getting the jugular pulse is to place the shallow cup over the jugular bulb, *i.e.*, a little above and one inch external to the sternal end of the clavicle, preferably on the right side. The sterno-mastoid fibres of the same side are relaxed. For each normal heart beat there are three waves on the tracing, the so-called a, c, and v waves (see diagram); the a wave is due to the auricular contraction, and the c wave is due to the ventricular contraction. Hence the tracing indicates the presence or absence of auricular contractions, and their relation to ventricular contractions, and the length of time intervening between the two; and if this is greater than one-fifth second the presence of partial heart block is suggested.

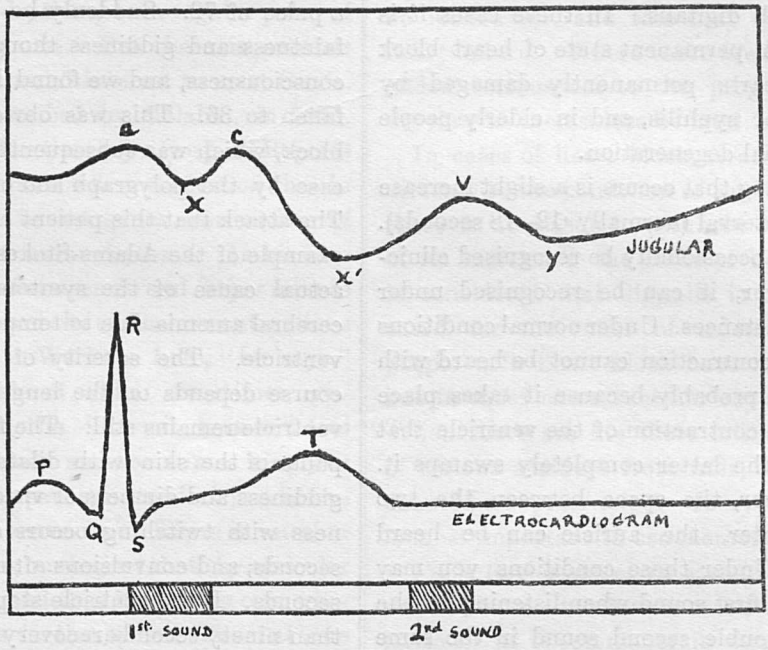
The second method is by means of the electrocardiograph, a sensitive galvanometer which records the electric currents generated by the heart at each beat. Here again we have a wave corresponding to, and very slightly preceding the auricular contractions usually designated by the letter P. This is followed by a depression Q (see diagram) and immediately afterwards there is a complicated figure due to and just preceding the ventricular contractions, consisting of a sharp elevation R, and a sudden depression S, and a gradual elevation T. As in the case of the jugular pulse an electro cardiogram indicates the relations of auricular contractions to ventricular contractions, and the length of time intervening between them —the P.-R. interval; but in addition certain inferences may be drawn from the shape of the ventricular complex, which becomes modified if certain branches of the auriculo-ventricular bundle are blocked, or if a ventricular contraction arises from an abnormal position in the heart, instead of coming down the bundle in the usual way from the auriculo-ventricular node. Again, a persistent inversion of the T wave so as to produce a depression instead of a wave

suggests myocardial degeneration. Naturally in both methods an accurate time-marker is used so as to show the correct time relations of the different parts.

The advantages of the polygraph method are the portability and simplicity of the apparatus; on the other hand, it is sometimes very difficult, if not impossible to get a tracing at all, and although the results are usually sufficient for all practical purposes, they do not give the same detail as can be obtained by the electrical method. The disadvantage of the electro-cardiograph is the complicated nature of the apparatus; on the other hand, when working satisfactorily, results can always be obtained very easily with no trouble to the patient, who may be lying in bed in a different building if necessary.

I do not propose in this lecture to explain further to you how to interpret electro-cardiograms. The subject is much too big. But I want to tell you how to recognise common types of cardiac irregularity at the bed side, using no other means but your fingers and a stethoscope. It is now largely possible to do this thanks to the research work carried out during previous years with the polygraph and the electro-cardiograph.

Sinus arrhythmia.—When listening to the heart of a child you will often notice during inspiration, the heart beats become more frequent, and that during expiration and at the end of the expiration the rate is diminished again. Electro-cardiographic examination has shown that the beats are always perfectly normal, and that the alteration in the rate of the heart is due to an alteration in the rate at which the sino-auricular node sends out its impulses, this rate being influenced by vagal action. The tone of the vagus is diminished during inspiration. This respiratory irregularity has been called the "youthful irregularity" by Mackenzie, and is perfectly normal. Occasionally the same phenomenon is observed with adults during quiet respiration; it is practically always observed when the respiration is deep.



Occasionally, there is a similar alteration in rate, with no relation to the breathing at all. Sinus arrhythmia is abolished when the rate of the heart is increased, as in exercise. Its chief importance is that it may be confused with other types of irregularity. When recognised, it should be treated as of no importance, and no remedial measures should be tried.

Heart block.—This is due to an impairment in the conducting powers of the auriculo-ventricular node, the auriculo-ventricular bundle, or any of its branches. It occurs in acute infective diseases, particularly rheumatism, and also after treatment with digitalis. In these cases it is temporary. A permanent state of heart block occurs in hearts permanently damaged by rheumatism or syphilis, and in elderly people with myocardial degeneration.

The first thing that occurs is a slight increase in the P.-R. interval (normally ·12–·18 seconds). This can only occasionally be recognised clinically. However, it can be recognised under certain circumstances. Under normal conditions the auricular contraction cannot be heard with a stethoscope, probably because it takes place so close to the contraction of the ventricle that the noise of the latter completely swamps it. When, however, the space between the two becomes greater, the auricle can be heard separately. Under these conditions you may hear a double first sound when listening to the apex, or a double second sound in the same position, when the interval between the auricular and ventricular beats is greater still, *i.e.*, when the auricle beats at the beginning of diastole, very soon after the second sound. Both these cases you will recognise as types of canter rhythm. Again, in cases of apparent mitral stenosis in young children, the presystolic or early diastolic murmurs may indicate heart block. Heart block is probably present much more often than is commonly supposed at the bed side.

A more advanced stage in heart block is where the P.-R. interval becomes so prolonged that occasionally ventricular beats are missed altogether. This can be recognised by listening to the heart, when suddenly in the midst of a natural rhythm one heart beat will be completely missed altogether; naturally the pulse will show the same intermittent character. In more advanced cases we may get a condition known as 2—1 heart block, where only every other beat of the auricle is effective in exciting a ventricular contraction. This may occur quite suddenly, so that the heart rate is suddenly halved. There is at present in Addison (bed 12) a patient who came up to my out-patients with a pulse of 72. Suddenly he had an attack of faintness and giddiness, though he did not lose consciousness, and we found his heart rate had fallen to 36. This was obviously due to heart block, which was subsequently proved to be the case by the polygraph and electrocardiograph. The attack that this patient experienced was an example of the Adams-Stokes' syndrome. The actual cause of the symtoms is a temporary cerebral anæmia due to temporary arrest of the ventricle. The severity of the symptoms of course depends on the length of time that the ventricle remains still. The first symptoms are pallor of the skin with dilatation of the pupil, giddiness and dimness of vision. Unconsciousness with twitching occurs after three or five seconds, and convulsions after fifteen or twenty seconds. If the ventricle stops beating for more than ninety seconds recovery is very rare. The Adams-Stokes' syndrome is uncommon, although heart block itself is common enough. The syndrome usually occurs when the grade of heart block for some reason suddenly increases; the reason is, that it takes some time for the ventricle to take up its new rythms; before this is established, the ventricle often stops completely for a time.

So far I have only talked about heart block, when the interval between the auricular and ventricular contractions is increased, or where certain auricular contractions do not excite the

corresponding ventricular contractions. All these are cases of partial heart block. In complete heart block none of the auricular contractions get through to the ventricle at all. Fortunately under these conditions the ventricle starts beating on its own account, but its own proper rhythm is very slow, usually below 40 a minute. An electrocardiograph shows a perfectly regular series of auricular contractions and another regular series of ventricular contractions, but there is no correspondence between the two. The recognition of complete heart block depends, then, on a regular pulse of less than 40 a minute. But there is another sign, which is of special interest to us at Guy's, as it was first described by Galabin, in 1875, and was published in the Guy's Hospital Reports of that year. It was the first suggestion that in man there could be complete dissociation of auricular and ventricular rhythms. In his case the pulse rate was between 20 and 30 per minute and he actually heard the auricular contractions by auscultation. "We have here," he says," a heart the auricle of which sometimes contracted twice in the interval between two ventricular pulsations and sometimes singly in the midst of a long pause, instead of just before the systole of the ventricle." There is another sign also depending on the fact that the auricular beat can be heard, and that it keeps on occurring at different points in the cycle. Thus, at one time you may hear an apparently reduplicated second sound, at another time a reduplicated first sound, and at another time the first sound is greatly increased in intensity, *i.e.* when the auricle and ventricle contract simultaneously. In the last case it is possible to see simultaneously a sudden large wave in the veins of the neck. This is due to the fact that the auricular contractions cannot drive the blood forward into the ventricle, as this is contracting. Hence the blood from the auricle tends to be driven backwards.

The prognostic significance of heart block depends on various conditions. In temporary cases associated with infectious conditions, such as rheumatism, it means that the myocardium is definitely affected, though recovery may occur. Hence rest and care are necessary. In permanent cases the heart block will not be usually fatal itself, but it is important in so far as it gives an indication as to the healthiness of the myocardium as a whole. If there is a lesion in the auriculo-ventricular bundle, there may be lesions spread throughout the muscle, and evidence of myocardial degeneration must be looked for, and this may be the cause of heart failure. Where there are fits there is an added seriousness to the prognosis, as these fits may in themselves be fatal.

In cases of heart block, treatment should be directed to the condition of the heart generally; there is no reason to withhold digitalis for fear of its increasing the grade of heart block, if it is considered that digitalis is otherwise indicated, for the relief of œdema, etc. Some people with heart block have led active lives, but in most cases exertion should be avoided. When there are fits there is the added danger of serious accident from falls, and this danger should be kept in mind. In syphilitic cases it is most important to use mercury and iodides.

Premature beats, extra systoles.—This type is one of the most common of all cardiac irregularities. It is commoner in men than women. Probably most people who reach middle life or advanced years have extra systoles at one time or another. In ordinary practice they are commonest among those who exhibit evidence of cardiac disease, but they often appear in other people as well. They are always abolished when the heart quickens, as occurs in exercise, and they often reappear as the heart slows down again.

The formation of premature beats is due to over-excitability of certain parts of the heart, which starts extra heart beats before the proper

time; after this premature beat has occurred, there is a compensatory pause until the heart takes up its normal rhythm again. The patient experiences corresponding sensations. The premature beat itself may or may not be felt in the chest. The long pause is noticed and often gives rise to a sense of uneasiness; this is ended by a sudden bump or shock in the chest when the heart renews its normal rhythm. These sensations are one of the cardiac sensations that are known as palpitations.

Research has shown that these beats arise either in the auricle or in the ventricle due to over-excitability of these parts. They may arise in a part of the normal path of conduction of the heart beat, when they are indistinguishable by the electrocardiograph from the normal beat except that they occur earlier than they should, and so the rhythm of the heart is disturbed. These beats are known as "homogenetic," or "homotopic." On the other hand they may arise from a part of the heart outside the normal path of conduction, when they are called "heterogenetic," or "heterotopic." In this case the shape of the curve on the electrocardiogram is abnormal. It is, of course, impossible to recognise these distinctions by auscultation. A radial tracing may help to determine if they are auricular or ventricular in origin. In certain cases these beats occur frequently. If we get a series consisting of alternate normal and premature beats the condition is known as "pulsus bigeminus," to be distinguished from "pulsus alternans." If we get a series of premature beats following immediately after one another, the condition is known as "paroxysmal tachycardia." I have no time to describe this more fully.

Premature beats can be readily recognised by the stethoscope. Variations occur according as the extra beat of the heart is a strong one or a weak one, *i.e.*, sufficient to raise the aortic valves and expel some blood or not. In the former case you will hear a group of four sounds coming close together in the middle of a series of normal heart sounds. The four sounds may be represented by the expressions *lub, dup, tum, ti*. The *lub dup* represents the two sounds of the normal beat; the third sound of the group, *tum*, represents the sound of the extra ventricular contractions, and the *ti* the closing of the aortic valves. When the extra systole is not strong enough to raise the aortic valves the fourth sound of the group, *ti*, is absent. You will hear, then, a group of three sounds close together represented by the expressions *lub, dup, tum*.

In the majority of cases extra systoles are of no prognostic significance. However, the more serious condition of paroxysmal tachycardia is to some extent related, and the possibility of this condition supervening should be born in mind. However, there is not much evidence that this often occurs. When extra systoles occur in people with heart disease, the nature of the lesions should be taken into account in estimating the prognosis, and the presence of the extra systoles need not make the prognosis worse. When they occur in people who are quite healthy, the patient should be reassured as to their unimportance. In no case should any treatment be specially instituted, and the patients should not be advised to refrain from out-door games, or in fact any exercise that they would otherwise be able to perform.

Auricular Fibrillation.—Under normal conditions the sino-auricular node or pacemaker, being the most excitable part of the heart, starts the impulses that cause the auricles to contract. In auricular fibrillation all parts of the auricles become overexcitable and start contractions on their own account. No proper co-ordinated auricular contractions can occur at all, the auricles being in a state of delirium. The ventricle is bombarded by innumerable small impulses from the auricles and they beat very quickly and very irregularly. The ventricles do not of course respond to every impulse from the

auricle, a certain amount of heart block is established, and only certain impulses get through.

The importance of this condition is indicated by the fact that more than half the cases admitted into a general hospital for heart failure suffer from auricular fibrillation. Cases of auricular fibrillation can be divided into two groups, rheumatic and non-rheumatic, the rheumatic group is about twice as large as the non-rheumatic, and of the rheumatic group about two-thirds are cases of mitral stenosis. Roughly speaking of all cases of auricular fibrillation met with, one half will be cases of mitral stenosis.

The recognition of auricular fibrillation is in most cases comparatively easy. Whether you listen to the heart or feel the pulse, you will find a complete absence of any dominant rhythm. The beats are completely irregular both in strength and in rate. If you take a radial tracing which shows the irregularity well you will often notice that at the end of one of the longer pauses you may get a comparatively weak beat instead of the strong beat you might expect. *Vice versa* after a short pause you may get a strong beat.

When the rate of the heart is quick, you will find on comparing the pulse with the heart beat as heard by auscultation that many heart beats entirely fail to get through to the wrist. In cases of mitral stenosis you never get a presystolic murmur because the auricle has ceased to beat. The murmur, if heard at all, will always be early or mid-diastolic. Occasionally it gives you the impression of being presystolic, but that is only because the heart sometimes contracts before the diastolic murmur is complete. You will never hear a true presystolic murmur coming after the end of the mid-diastolic when the pause is sufficiently long for the latter murmur to be completed.

If you come across a heart beating irregularly and at a greater rate than 120 a minute, it is almost bound to be a case of auricular fibrillation. When the heart is beating slowly, say under 100, and not very irregularly, recognition is more difficult. However, there is this further valuable sign. You ask the patient to take some mild form of exercise, such as bending up and down, or sitting up and lying down in bed once or twice. If auricular fibrillation is present the exercise will make the heart more irregular. In other conditions such as extra systoles or heart block, the pulse becomes more regular with exercise.

When auricular fibrillation has once developed, it almost always persists for the rest of the patient's life. It is a serious condition. Very few patients live longer than ten years. The immediate prognosis depends largely on being able to keep the pulse rate below 90, which is a favourable sign, and this is the great aim in treatment.

The great reputation digitalis possesses in heart disease rests almost entirely on its success in treating this condition. It is almost a specific.

If the pulse is over 100, the patient should be put to bed and treated with 10-15 minims of tincture of digitalis three or four times a day. If there is no slowing of the pulse, the dose is increased until definite symptoms of digitalis poisoning begin to appear. These are nausea, vomiting, diarrhœa, and headache. The dose must now be diminished to a point to avoid these symptoms, and it may be continued until the desired effect is obtained. If unsuccessful, then try digitalin by the mouth or, if necessary, strophanthus, or strophanthin.

The aim is to keep the pulse between 80 and 90 while the patient is lying in bed. When this is attained the patient may get up, and the dose is then gradually diminished, when it will usually be found that the pulse remains slow. The minimum dose necessary for this is deter-

mined, and the patient should continue taking this during the remainder of his life.

If in spite of digitalis treatment the pulse rate still remains high, nothing more can be done. The other indications are to avoid excessive exertion, to avoid infection, and pregnancy, and constipation, and to keep as healthy as possible. General anæsthetics should only be given if the patient's life can be considerably prolonged by an operation, *i.e.*, when one is practically unavoidable.

The action of digitalis in slowing the heart is due to the production of heart-block, in degree, sufficient to stop the numerous impulses from the auricles which are overwhelming the ventricle. This heart-block is probably due to direct action on the cardiac muscle, presumably somewhere in the auricular-ventricular bundle. In healthy hearts digitalis acts by producing vagal inhibition. When the digitalis is pushed to too great an extent, apart from the other symptoms of poisoning, "digitalis coupling" may occur. The pulse is slow, and the heart beats alternately strongly and weakly. When this occurs the digitalis should be omitted. It is a sign of danger.

Pulsus alternans.—In this condition the pulse is quite regular when felt at the wrist, but each beat is alternately strong and weak. It may occur with a fast or slow rate of beating. It is a sign of cardiac exhaustion, or commencing failure of the heart's contractile power. The prognosis is serious, and it is worse when the heart is beating slowly. It may be recognised by auscultating the heart or by feeling the pulse, but it is often necessary to take a radial pulse tracing, as the difference in the size of the beats may be small. It can be differentiated from the "pulsus bigensinus," as here the weak beat, which is due to an extra systole, follows quickly after the strong beat, and is followed by a longer interval.

The treatment consists in, as far as possible, giving the heart less work to do, viz., by rest. Recently it has been urged that digitalis is successful in these cases.

Gunshot Wounds of Joints: their Pathology and Treatment.

Hunterian Lecture delivered before the Royal College of Surgeons of England on March 2nd, 1917.

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Mr. PRESIDENT and GENTLEMEN,—

I beg that you will accept these observations as suggestions, based on the somewhat scanty pathological data at our disposal and an experience necessarily incomplete, rather than as ordered statements of surgical law resulting from a comprehensive study. My personal impressions have been gained almost entirely from field ambulance and casualty clearing station work in France and Belgium, and my remarks are therefore subject to correction by those who have a more intimate knowledge of the later course and treatment of these lesions. At the same time one wishes to emphasise the supreme importance of an adequate treatment of wounds at the earliest favourable opportunity.

Since the progress of joint wounds has been far from satisfactory and radically different lines of procedure have been advocated, it would seem profitable at this stage of our experience to consider all the pathological data at hand in the hope of rationalising treatment in general and controlling that of individual cases. Unfortunately, the scientific facts available are insufficiently complete to place any definite sys-

tem beyond the range of debate. It remains to utilise them in a critical examination of the of the various practices in vogue, and otherwise to formulate a working basis on the ground of clinical observation, guided by an ever-present recognition of military limitations and resources.

PATHOLOGY.

A joint directly wounded is subject to infection from two sources, the projectile itself and the track of the projectile from the exterior. When present, the former varies in degree of virulence from the comparatively clean undistorted rifle bullet to the irregular shell fragment enwrapped in muddy clothing and loaded with bacteria. Infection may also spread to a joint from neighbouring wounds, either by way of the soft tissues or along a fissure in a fractured bone. Joints are generally agreed to be peculiarly susceptible to infection; in civil practice a surgeon tends to take more precautions in opening a joint than any other cavity, whilst it is significant that joints are early affected in most pyæmic conditions. Although the signs of inflammation are less obvious in wounded joints on account of the usual outlet for excess of fluid and consequent relief of tension, the frequency of disaster is at least as great. An environment conducive to the well-being of micro-organisms obtains; the synovial cavity presents a sac comparatively free from air and a plentiful supply of desirable medium; on the other hand, it is probable that the arrangement of the blood-supply, the anatomical formation of the synovial cavity with its various complexities, and the viscidity of the fluid may hinder the excursions of the polymorphs and the free circulation of lymph on which the inflammatory processes depend for success.

What powers has a joint of combating bacterial invasion? *That there is a very considerable reactive mechanism has been demonstrated* by Lazarus-Barlow, Delbet, and other observers. A foreign body in a joint, possibly lodged in bone, may be covered with micro-organisms; the surface of the osseous cavity in contact with the projectile and the edges of the wound in the synovial membrane also are infected; but it is with the greatest rarity that the synovial fluid and blood effused into the joint exhibit bacteria within the first 24 hours. According to Lazarus-Barlow, a large proportion of fluids show no organisms in films or on culture, even at a much later period. Blood withdrawn from a wounded joint at a very early stage contains excess of leucocytes. This question of leucocytosis may be examined more closely, as it has a practical bearing on prognosis and treatment. Generally speaking, an aseptic lesion is associated with a mononuclear leucocytosis, and a septic lesion with a polynuclear leucocytosis; moreover, the latter varies to a certain extent with the potency of the infection. Hence a differential count of the leucocytes and red cells in the synovial cavity of a wounded joint, together with an estimate of the total number in the effusion, enables one to classify roughly the severity of the infection and forecast a prognosis accordingly (Lazarus-Barlow). The method of "pyoculture" is said by Delbet to afford a more accurate estimate in the same direction, as it indicates directly the presence and relative virulence of bacteria with greater delicacy than the usual cultural methods.

Various micro-organisms have been found in wounded joints; their exact nature does not appear to bear any definite relationship to the clinical issue, except in the case of streptococcal infection where the prognosis is bad.

When the wound is accompanied by fracture, as occurs almost invariably in joints other than the knee and occasionally the shoulder, the outlook is definitely more serious, as the pheno-

mena of osteomyelitis in some degree may be imposed on those of joint infection pure and simple.

Anatomically, the following forms of joint wound may be recognised :—

1. Wounds in which the articular lesion merely represents an element of a wholesale destruction of the limb in the neighbourhood of the joint.

2. Articular fractures proper, including the majority of joint wounds. A projectile may be present in the synovial cavity or in the adjacent bone; or, having passed through the joint, it may be arrested in the ligaments or the soft tissues outside. The types of fracture are numerous; one or more bones may be affected. (*a*) An impression or gutter in the articular or non-articular surface of the bone is made by the projectile in passing. (*b*) The projectile is embedded in the surface of the bone; fissures may radiate from the osseous cavity. (*c*) The projectile has passed through the bone with or without fissuring. The latter possibility is only likely to be realised where the cortex of the bone is thin, as in the lower extremity of the femur. Where the compact layer is thicker, as in the upper end of the tibia, penetration is almost invariably accompanied by fissures. (*d*) The projectile is lodged in the substance of the bone forming a cul-de-sac with or without fissuring. The latter condition is again dependent on a lack of thickness in the shell of campact bone. (*e*) One or more fragments of bone of varying size, from a small splinter to a large block such as a femoral condyle, are separated with or without dislocation. (*f*) Fissures pass for a considerable distance into the shaft of the bone. (*g*) There is much comminution of one or more of the osseous extremities.

3 Penetrating wounds of the joint without fracture, in which the projectile may or may not remain in the synovial cavity.

Classes 2 and 3 include a definite and common type of wound, usually due to a rifle bullet, in which the projectile has passed through the joint, inflicting tiny wounds of entrance and exit, with or without fracture.

In many cases it is difficult to decide on anatomical grounds whether the synovial cavity has been penetrated or not; *e.g.*, through-and-through wounds of the front of the thigh in the neighbourhood of the supra-patellar synovial pouch, or wounds in which the foreign body has been arrested in the ligaments before entering the joint. An effusion into the joint commonly occurs in these cases.

A fissure may reach the articular extremity of a bone from a fracture originating outside the joint, in which case there is an additional danger of infection when the foreign body remains lodged in the shaft at the site of fracture. On the contrary, a projectile entering the bone outside the joint may pass into the articular extremity and lodge there without causing a break of the actual articular surface.

TREATMENT.

General Considerations.—Apart from the nature of the joint wound itself, it is essential to take into account certain other factors of importance in deciding on a line of treatment.

The condition of the patient may be profoundly influenced by shock or, at a later stage, by toxæmia. Either of these may result from the wound in question or from wounds in other parts of the body. Shock may prohibit an operation otherwise indicated; toxæmia of marked degree may precipitate an amputation. Injury to neighbouring parts, *e.g.*, the popliteal artery in the case of the knee, or the chest in the case of the shoulder, may render the articular wound of secondary importance and modify accordingly the treatment.

The age of the wound is a factor of the greatest importance. Given the necessary con-

ditions, the earlier the primary or prophylactic form of treatment is applied the better. During the first 24 hours there is ample evidence to show that the sources of infection tend to be limited to their original foci. After this period there is less possibility of complete eradication. At the same time, it is an unjustifiable procedure to open a joint under unsatisfactory conditions as regards asepsis; a further delay, if not too prolonged, affords the lesser evil. Professor Tuffier, who has great experience in this subject, tells me that he has recently had results almost uniformly favourable from operations performed as late as the third day after receipt of the injury. To perform any considerable operation on a joint requires a surgeon of some judgment and ability, not too pressed for time, a well-equipped theatre, and a preliminary X-ray examination. It is further desirable that there should not be urgent need for transport immediately after operation. These conditions are usually fulfilled at a casualty clearing station, but not during periods of high pressure. *A strictly conservative line of treatment is preferable to half-hearted operative measures.*

In planning treatment, even in the earliest stages, one should have in mind a higher ideal than that of merely saving life or limb. *Consistent with the patient's general safety, every effort must be made to anticipate unnecessary orthopædic disability.*

Observations on the treatment of joint wounds in general apply more particularly to wounds of the knee. Reference will be made later to peculiar features in the treatment of individual joints.

Preliminary Treatment.—Immobilisation is the most important measure in the early stages. The sooner the joint is immobilised the better; a splint or other improvised fixation apparatus should be applied whenever possible at the aid-post, if not before, and at the field ambulance invariably. The objects are obvious: in the first place, unnecessary shock and hæmorrhage are obviated by fixation of the limb dur- the first stages of transport; secondly, infection is limited. Not only does movement tend to spread infected particles throughout the cavity, but it may cause infection of a previously unaffected joint from a focus outside the synovial membrane. Beyond this immobilisation and the application of ordinary dressings, one would suggest that no further treatment should be applied to the joint as such until the patient reaches a unit equipped for any necessary operation. It is important, however, that he should reach this unit at the earliest possible moment.

Expectant Treatment.—There is a large class of cases in which the evolution of the wound is so habitually favourable as to render any form of primary arthrotomy unjustifiable; although it may be necessary to remove an extra-articular source of infection. Even the most radical school of joint surgery admits that the *in-and-out type of wound with punctiform cutaneous apertures of entrance and exit has a very good prognosis.* The projectile, an undistorted rifle bullet or a very small shell fragment, has presumably introduced into the joint an inconsiderable amount of infective material of which it has carried away the greater part on leaving. The internal source of infection is thus reduced to a minimum; there is practically no communication with the exterior. The joint can adequately deal with the situation apart from operative interference. Even if there be an osseous lesion it may be regarded as a simple articular fracture. The essential steps of treatment are a careful cleansing of the skin around the wounds and a rigid immobilisation of the joint. There may be a considerable effusion into the synovial cavity; to aspirate this at an early stage is potentially dangerous, since in-

fective matter may be sucked into the joint by the procedure. Moreover, the accumulation tends to recur, and is possibly beneficial as a reactive product. The injection of antiseptics such as ether or formalin glycerine emulsion has been advocated, but it would seem more reasonable to avoid any form of interference with the natural mechanism on which the expectant form of treatment essentially relies.

More debatable is the treatment of those *cases in which a rifle bullet or tiny fragment of shell has lodged in the substance of an articular extremity after passing through the synovial cavity, creating an insignificant wound of entrance and no obvious fissuring of bone.* As before, there is practically no danger of infection from without, and although there is a definite source within, the nature of the projectile renders it comparatively innocuous. If the foreign body is so situated as to render its removal more than usually difficult without considerable derangement of the joint and enlargement of the osseous track, the risks of operation are greater than those of retention. But if the body be more readily accessible the balance turns in favour of a primary operation.

An essential feature of expectant treatment is a constant supervision of the clinical course of a case supplemented by pathological examinations of the fluid of the joint. In this way, adverse signs are detected at the earliest opportunity should the necessity for more active measures arise.

Extra-synovial wounds, whether of the soft parts or of bone, are treated as soon as possible by removal of foreign bodies, thorough excision, Carrel's tubes, etc.; arthritis may thus be obviated even though a fissure radiate from the focus of an osseous lesion of the joint. Frequently an articular effusion accompanies these neighbouring wounds; primary arthrotomy is not on that account indicated. Strict immobilisation is essential.

Primary Operative Treatment.—In all classes of joint wound other than the foregoing there is at least one potent source of progressive infection which demands removal at the earliest opportunity. This may be a foreign body, an infected cavity of bone, a synovial wound open to infection from without, or all three combined. *A priori*, it would seem highly desirable to perform the necessary operation at the earliest favourable opportunity. In fact, experience has shown that *this prophylactic form of treatment is most reliable when applied within the first* 12 *hours*, although its value is by no means limited to that period. The following measures are included under this heading:—

1. Excision of external wounds and suture of the synovial membrane.

2. Arthrotomy, followed by (*a*) removal of foreign matter, blood clot, infected edges of synovial membrane; (*b*) treatment of osseous cavities and removal of fragments of bone ("esquillectomy"); (*c*) suture.

3. Partial or complete resection of the joint.

4. Amputation.

Cases in which there is a lesion of the soft parts more extensive than the punctiform wounds of a former class, but little or no bony defect; and in which the joint contains no foreign body.—These are treated by careful excision* of the wound as far as the synovial membrane; the edges of the latter are excised also, and blood clot is expressed from the joint. Lavage of the cavity and the injection of antiseptics is a doubtful proceeding in these cases, where the object of treatment is to prevent further infective material from entering the joint and otherwise to rely on natural resistance. The gap in the membrane is completely sutured with catgut if possible.

* The routine excision of wounds, since accepted as a general measure, was advocated and practised with excellent results by Captain E. T. C. Milligan, an Australian surgeon, as early as January, 1915.

The external wound is treated by simple drainage, Carrel's method, or salt packs. In excising the track it is advisable to make it more or less cone-shaped, thus facilitating outward drainage. The application of an antiseptic, such as ether or brilliant green, supplements the mechanical disinfection. Primary suture of the whole track implies unusual success in antisepsis, as it necessarily risks a secondary infection of the joint.

When the gap in the synovial membrane is too large to be completely sutured, the prognosis is less favourable, as the danger of reinfection remains. It is often possible to close the joint by suturing into position a flap of ligament or fascia free from infection, and partially separated from the tissues in the neighbourhood by an incision which does not eliminate its blood-supply. Failing this, excision of the wound is followed by Carrel's treatment or merely by the application of aseptic dressings (the latter not to be removed apart from definite indications). On no account should drainage-tubes be introduced into the joint at this stage; they increase very definitely the danger of infection from without and serve no useful purpose.

Cases in which the joint contains a foreign body with or without fracture; and cases in which comminution of bone is associated with an open wound of the joint.—In these there is a focus of infection within the joint; there may be a path of infection from the exterior; there may be a potentiality of mechanical derangement of the joint. According to the varying importance of these factors, there is a range of operative treatment from simple extraction of a foreign body to complete resection of the joint or even amputation. The desirability of operating on the second class of case (comminution without remaining projectile) has been debated; but as detached fragments of bone in association with an open wound essentially represent infected foreign bodies, and are more than likely to overtax the natural reactive powers of a joint already fully exercised, their early removal is definitely indicated.

A careful X-ray examination is a necessary preliminary to the treatment of these cases; foreign bodies and fractures are recognised and localised. In all articular operations the application of a tourniquet is of great advantage. The skin of the part is thoroughly cleaned. External wounds are excised as before and temporarily sutured or plugged with antiseptic gauze. This done, fresh instruments, etc., are used and the joint opened.

Arthrotomy and "esquillectomy."—Arthrotomy is not at this stage a procedure of drainage.—Various methods have been advised, from simple enlargement of the original wound to the routine practice of an extensive incision such as a semilunar arthrotomy in the knee-joint. Although it is essential to make an opening of sufficient size to examine the lesion completely and methodically and to avoid unnecessary bruising of the synovial membrane by manipulation, it is unjustifiable to open up susceptible surfaces to the danger of further infection or to cut through important ligaments unless the position of the foreign body or fracture definitely demands. If preliminary excision has been carefully performed, it is immaterial whether the original wound be included in the incision or not.

The joint is subjected to a mechanical cleansing. Foreign material and fragments of bone are carefully removed. Should the projectile lie in an osseous cavity, extraneous organic material, clothing, etc., are apt to remain in the bed after its withdrawal. Hence the potential source of a focus of osteitis, which is the more likely to spread as fissures so frequently radiate from this centre. The cavity is therefore curetted until the superficial infected spongy tissue, usually infiltrated with blood and of

blackish colour, has been completely cleared away and cancellous tissue of normal aspect, bleeding uniformly, has been reached. Incidentally, the scrapings yield a growth of micro-organisms on culture, whilst the cavity after treatment is sterile. During these manipulations the rest of the synovial cavity should if possible be packed off with gauze as in an abdominal operation, to avoid unnecessary infection of the general sac. Synovial membrane which has been bruised by the passage of the projectile is also found to harbour micro-organisms, and should be removed, the gaps being sutured afterwards. The joint is then washed out with saline solution or with an antiseptic such as brilliant green, which is comparatively harmless to the tissues.

Cavities in the bone may be packed with iodoform to induce hæmostasis and as an additional antiseptic measure; but the mechanical cleaning, removal of clothing, blood clot, etc., is of far greater importance than the application of antiseptics.

The synovial membrane is sewn up completely with absorbable material. In certain cases it is possible in sewing up to eliminate an osseous lesion from the general sac and so provide for its drainage outside the joint. If a gap remains in the synovial membrane it may be possible to improvise a covering as before. When the superficial tissues are sewn, it is wise to leave a drain as far as the synovial wound for 48 hours.

Although the establishment of a path to the exterior is dangerous, some surgeons recommend a routine drainage on the joint itself for 24 or 48 hours after operation. This is unnecessary, except in doubtful cases where it may be advisable to establish a temporary arthrostomy as a safety-valve. There may be no alternative when the gap in the synovial membrane is too wide for suture. Needless to say, a joint thus open should be dressed subsequently with a scrupulous regard for asepsis.

Resection.—The French have applied the convenient term "esquillectomy" to the removal of fragments and curetting of cavities of bone. To decide in which cases esquillectomy should be replaced by a typical resection is one of the most difficult questions in the surgery of joint wounds. Many French authorities have been in favour of an extensive application of treatment by primary resection. Leriche considers that esquillectomy is only suitable for small parietal fractures, and that any considerable fracture involving a solution in continuity of the articular surface demands a typical resection of the joint. Undoubtedly it is preferable, in any case which will definitely require resection sooner or later for orthopædic reasons, to resect at this early stage in order that the sources of infection may be removed and orthopædic demands satisfied at the one operation. Indications of this nature vary according to the joints affected and will be referred to later under their individual headings. But, regarded purely as a prophylactic measure to prevent infection, primary resection is proved by the excellent results of esquillectomy to be too radical in the large majority of cases.

When it has been decided to resect a joint, however, the operation should generally conform to type as far as possible, with due regard to the removal of a sufficient portion of the extremities of bone and the preservation of capsule, periosteum, and important extra-articular structures. For instance, in a wound involving serious comminution of the femoral condyle without fracture of the tibia it is useless to preserve the articular surface of the latter and so delay the union of the bones.

Amputation.—Amputation as a primary measure is indicated by extensive wounds of the limb, or the combination of a joint wound with

an extra-articular lesion of grave importance, such as rupture of the popliteal artery and vein. The presence of wounds in other parts of the body likely to lower the general powers of resistance to articular infection may decide in favour of amputation. During a stress of work, when the continued application of careful after-treatment is a doubtful possibility, amputation may be practically preferable in certain cases. The upper limb should never be amputated unless there is absolute necessity. In the lower extremity an amputation stump is of more functional value than a limb greatly shortened by extension resection.

Primary Treatment in doubtful cases.—There are occasions on which the exact line of treatment is not definitely indicated; it is perhaps difficult to decide whether a given lesion demands resection of the joint or whether a more limited procedure will suffice to eliminate infection. In these cases the more conservative measure may be combined with a temporary *arthrostomy*—made *de novo* or adapted. Should the course be unfavourable, this latter will afford a safety outlet, and secondary suture may be applied at an early stage should all go well. The same line may be adopted where primary treatment has for some reason or another been too long delayed.

To effect arthrostomy an original wound (preferably an exit wound) may be left unsutured after excision at its edges; a gap may be left in an operative incision; or a special opening may be made. In the case of the knee, Fieux suggests the following technique: a crucial or T incision is made into the upper and outer quadrant of the supra-patellar pouch (frequently this merely implies the modification of the upper end of an arthrotomy wound). The corners of synovial membrane are sutured to the skin with the object of shutting off peri-articular tissues as far as possible. The limb is immobilised and raised. On the fourth and fifth day, if infection does not develop in the joint, the synovial edges are released and sutured together; the joint is thus completely closed.

To be continued.)

Appointments.

Medical School Appointments

OCTOBER–DECEMBER, 1917.

Dressers or Clerks in Special Departments:—

A. *Throats* (Mr. Mollison). *Orthopædics.*—Messrs. T. G. D. Bonar, C. Gill-Carey, G. M. Thomas, J. E. van der Merwe and E. F. Kerby.

B. *Throats* (Mr. Layton). *Genito-Urinary.*—Messrs. H. F. G. Berncastle, W. K. McKay and C. G. D. Siggs.

C. *Children, Eyes* (Mr. Eason).—Messrs. G. R. Aspinwall, W. H. Cellier and F. W. Reitz.

D. *Skins, Nerves, Eyes* (Mr. Ormond).—Messrs. F. K. Escritt, C. Moffatt, A. A. Osman and W. H. Simmons.

Obstetric Dressers.—Messrs. H. P. Barker, E. H. L. LeClezio, A. R. Neckles, G. F. Peters and S. A. Withers (Mr. Bellingham Smith); R. Gainsborough, R. S. Ralph, G. V. Richards, R. W. Warrick and S. Wolff (Mr. Chapple).

Surgeons' Dressers.—Messrs. C. H. Horwitz, K. Mullen and L. Lyne (Sir Arbuthnot Lane); H. M. Brown, G. B. Dowling and S. H. Robinson (Mr. Dunn); J. Kendall, A. G. Ord and H. W. Southgate (Sir Alfred Fripp); G. Hume, E. R. Webb and R. C. B. Ledlie (Mr. Steward).

Extension Medical Ward and Post-mortem Clerks.—W. R. Carling, W. G. Hay, M. F. Ismail, L. Lavine and H. LeVieux (Dr. Hale White); S. T. Barrett, C. V. Brown, A. K. Day Lewis, G. Massie and C. H. St. John (Dr. Shaw); C. R. Cade, G. A. A. Bradnack, E. E. D. Gray, C. T. Helsham and H. N. Schapiro (Dr. Fawcett); P. J. Briggs, I. R. Florence, R. B. P. Lansdown, A. M. Mishad and H. S. Morris (Dr. Beddard).

Assistant Surgeons' Dressers.—Messrs. H. Ameen, J. G. Barrie and S. Rose (Mr. Fagge); J. V. C. Braithwaite, M. Cohen, L. Burvill-Holmes and A. E. Sawday (Mr. Rowlands); W. T. Flooks, B. M. Tonkin and J. E. Wright (Mr. Turner); W. Mark Brown, W. W. Payne and G. K. Reeves (Mr. Hughes).

Medical Ward Clerks (first three months). Messrs. S. Cohen, G. L. Cutts, K. M. K. Duff, G. P. Lindsay, E. T. Lloyd, D. J. O'Meara, C. M. Probert and N. V. Wadsworth.

Clerk in Surgical Out-Patient Department.—Mr. W. H. Summerskill.

Student Demonstrator of Microscopical Pathology.—Mr. M. Cohen.

Student Assistant in the Bacteriological Department.—Mr. C. H. St. John.

R.N.M.S.

The following appointment has been made:—
To be temporary Surgeon:—W. S. Kidd.

A.M.S.

Temp. Major A. A. Smith has been appointed Assistant Director of Dental Service, to be temp. Lieut.-Col. whilst so employed.

R.A.M.C.

Lieut.-Col. A. J. Collis, Cyclist Battalion, T.F., to be temp. Lieut.-Col.

To be Acting Lieut.-Col.—W. L. Baker.

To be Captain.—Lieut. R. H. C. Pryn.

Temp. Lieuts. to be temp. Captains:—C. R. Howard, E. N. Glover, N. E. Kendall, H. L. Messenger, P. Rose, H. E. H. Mitchell, H. S. Knight, S. C. H. Bent, V. T. C. Bent, A. Reeves, D. C. Druitt.

To be temp. Lieuts.—R. S. Harper, A. W. Soper.

Second Lieut. R. D. Passy (from Gordon Highlanders Special Reserve).

Officers relinquishing their Commissions:—Capt. W. Elwood, Capt. C. A. E. Ring, Capt. W. H. Robinson.

Temp. Lieuts.:—E. Evans, V. P. G. Pedrick, C. W. Bent, H. R. Marsh.

Special Reserve of Officers.

To be Lieuts.:—N. H. S. Maelzer, J. W. H. Grice, J. J. Conybeare, H. D. Apergis.

Lieut. F. R. LeBlanc has been appointed Bacteriologist at Bagdad.

Civil.

E. N. Meachen, M.D. Lond., has been appointed Superintendent of the Headlingham and Black Netley Joint Sanatoria for Consumption in the County of Essex.

Papers by Guy's Men.

J. W. H. Eyre, M.D., M.S. Durh., D.P.H. Camb., and Herbert French, M.D. Oxon., F.R.C.S. Lond., in collaboration with Adolph Abrahams, M.D. Camb., M.R.C.P. Lond., and Norman F. Hallows, M.B., B.Ch. Oxon.:—Purulent Bronchitis: its influenzal and pneumococcal bacteriology.—*The Lancet*, Sept. 8th, 1917.

E. F. Reeve, M.B., B.S. Lond., M.R.C.S.:—The treatment of Functional Contracture by Fatigue.—*The Lancet*, Sept. 15th, 1917.

R. J. Green, L.D.S. Eng.:—Two cases of Gunshot Fractures of the Mandible with loss of substance.—*Ibid.*

Roll of Honour.

R.A.M.C.
Killed in Action.

Temp. Capt. H. Ackroyd, M.C., V.C., att. Royal Berks Regiment.

Lieut. C. B. Dix, 8th E. Surrey Regiment.

Capt. A. Traill, who "died on service," was erroneously reported in our last issue as having been "killed in action."

V.C.

Temp. Capt. H. Ackroyd, M.C., M.D., late R.A.M.C. (att. Royal Berks Regiment). For most conspicuous bravery. During recent operations Capt. Ackroyd displayed the greatest gallantry and devotion to duty. Utterly regardless of danger, he worked continuously for many hours up and down and in front of the line, tending the wounded and saving the lives of officers and men. In so doing he had to move across the open under heavy machine gun, rifle, and shell fire.

He carried a wounded officer to a place of safety under very heavy fire. On another occasion he went some way in front of our advanced line, and brought in a wounded man under continuous sniping and machine-gun fire. His heroism was the means of saving many lives, and provided a magnificent example of courage, cheerfulness, and determination to the fighting men in whose midst he was carrying out his splendid work. This officer has since been killed in action.

Honours.

Wounded.

Capt. N. M. Clarke, R.A.M.C.

Capt. J. H. Jones, Canadian A.M.C.

Capt. H. H. Elliot, R.A.M.C., att. Rifle Brigade.

We express our regret to Lieut. J. H. Mayston, R.A.M.C., who has been wounded, for having reported him in our issue of the 8th inst. as "killed in action."

Change of Address.

R. D. Tanner, Esq., L.D.S., Public Health Department (School Clinic), Huddersfield, Yorkshire.

Capt. G. Covell, I.M.S., c/o Messrs. Grindlay, Bombay.

Capt. C. R. Hodgson, A.A.M.C., No. 14 Australian General Hospital, A.I.F., Egypt.

2nd Lieut. J. A. Currie, No. 1a, Reserve Brigade, R.F.A., Newcastle-on-Tyne.

The Sciences.

Anatomy and the Dissecting Room.

The primary object of dissecting is to learn anatomy. By seeing the structures lying in their proper relations one to another a mental picture is obtained which cannot be had by reading or looking at pictures; by cleaning these structures and tracing them from above downwards their course is impressed on the mind; and by removing each muscle from its attachment those facts are learnt which have been taken for granted when first reading the bone.

In addition, dissecting trains the fingers and develops the sense of touch, and that delicate muscle sense which is so necessary to aid the eye in carrying out a delicate manipulation.

The basis of anatomical knowledge is a thorough acquaintance with the bones. These can only be learnt by handling the bone and making out each point on it as the description in the book is being read. Hence it is absolutely essential to buy a half skeleton and a disarticulated skull. (These may be had from Hancock, the dissecting-room porter, who will also supply apron and sleeves—price 2s. 6d.—and cases of instruments).

The man who sits in an easy chair with an open Gray upon his knees and no bones by his side is simply wasting his time.

BOOKS AND INSTRUMENTS.

The student must have two books of anatomy, the one to read it systematically by starting with each muscle, nerve, or other structure, the other to read it topographically as each structure is exposed in the course of dissection.

The book for the latter is Cunningham's Practical Anatomy (2 vols., 10s. 6d. each); it should be taken into the room and read before, during, and after each day's work.

The best books for the former are Gray's or Cunningham's Anatomy. Those reading for higher examinations might also get Quain's Anatomy, of which the eleventh edition is now appearing in parts. These will also need at some period a book on Embryology. The best book on this subject for students is Keith's as it is written from a surgical point of view.

The following instruments are necessary:—Three scalpels, two pairs of *dissecting* forceps, and two sets of "hooks." No other instruments are necessary, and the small forceps used in the biological department are worse than useless.

PHYSIOLOGY.

Physiology, which forms the basis upon which scientific medicine and surgery rest, will require the most earnest attention on the part of the student during the short space of two years which he can devote to it, and he will find that his understanding of the medical, surgical and pathological problems with which he will meet later on varies directly with the thoroughness of his physiological ground work. While attendance at physiology lectures and the reading of some elementary work on the subject, such as Huxley's *Elementary Lessons in Physiology*, or the smaller works by B. Moore and by Foster and Shore, during the first year is undoubtedly useful, yet for most men the practical study of Physiology begins in the first summer session. During this session he attends the classes in Practical Histology which are held three times a week, and for which he will need a microscope, certain mounting materials, and Schäfer's *Essentials of Histology*, which should be carefully studied.

During the first summer session and the first half of the second winter session the student should attend the lectures on Physiology (for times, *vide* notices), and also the tutorial classes which are held by the demonstrators. During this time he should read the subject in some text-book such as Starling's *Principles of Human Physiology*, Halliburton's *Handbook of Physiology*, Stewart's *Manual of Physiology*, or Howell's *Text-book of Physiology*. While attending the practical classes held during the winter the student is advised to read *Practical Physiology* (published by Arnold).

Candidates for the M.B. of London or other Universities must in addition attend the class in advanced practical physiology held twice a week during the second winter session, and this class should also be attended by men working for the first F.R.C.S. examination.

Those desirous of obtaining distinction in the second M.B. examination should supplement the course of reading indicated above with original papers in the *Journal of Physiology*, with parts of Schäfer's *Text-book of Physiology*, *Recent Advances in Physiology and Bio-chemistry*, edited by L. Hill; *Further Advances in Physiology*, edited by L. Hill; and Leathes' *Problems in Animal Metabolism*. Revision classes are held by the demonstrators during the two months preceding the first F.R.C.S. and the M.B. examinations and should be attended by all candidates.

CHEMISTRY AND PHYSICS.

The student is often tempted to regard the study of Chemistry and Physics as one of very little use when once his preliminary examination is passed; but he will find in his study of the sciences of Physiology, Pharmacology and Pathology that a proper understanding of Chemistry and Physics is invaluable and essential. That this is so, is now fully recognised in the curriculum of the London University which should be carefully studied by every London student.

The matriculated student will, in his first year, study Inorganic Chemistry, Physics, and General Biology,

and at the end of this period, provided he has worked diligently in the laboratories, and attended the lectures and revision classes regularly, should have no difficulty in passing the First Examination for Medical Degrees. In his second year he will study Organic and Applied Chemistry, together with Anatomy and Physiology, and at the end of the second winter, provided, as before, that he has worked steadily from the commencement, should have little difficulty in passing the First Part of the Second Examination for Medical Degrees. Anatomy, Physiology, and Pharmacology are then taken as the Second Part of this Examination, at the close of the third winter, prior to commencing clinical work in the wards.

From the Conjoint and the Dental student only six months' work is required. but those entering without previous knowledge of Chemistry and Physics will find that time hardly sufficient, and are usually advised to take the full "year" of three terms, or nine months.

The importance of practical work cannot be too greatly emphasized, and lectures and books can but supplement work done in the laboratory. Guy's men have no excuse for neglecting laboratory work. The Chemical Laboratory, for example, is open from 9 a.m. to 5 p.m. on Mondays, Tuesdays and Wednesdays, and from 9 a.m. to 6.30 p.m. on Thursdays and Fridays, and students are strongly urged to form early the habit of spending their spare hours, apart from those officially allotted, in one or other of the laboratories. Reading should be left for the evening. After a day in the laboratory, reading a good text-book will be found to give ample scope for thought, and rarely, indeed, be practical experience that is so destructive of thought, and such reading is very properly stigmatised as "cram." "Cramming," or the memorising of words and phrases, without a knowledge of the corresponding realities, is one of the worst intellectual habits a student can acquire, and in the long run invariably leads to failure.

PRACTICAL PHARMACY, MATERIA MEDICA, AND DISPENSING.

One of the many important things all medical students must know is how to write a prescription; it may even be necessary for the majority, when qualified, to know how to dispense the same, so that the student will do well not to neglect acquiring as much knowledge of this subject as he can.

The student is taught practically the methods of prescribing, he practises writing prescriptions for combinations of drugs with due regard to incompatibility, and he is taught how to dispense the prescriptions he has himself written.

The course covers the syllabus of the Practical Pharmacy of the Conjoint, the Intermediate M.B. Lond., and the Third M.B. Cantab.

MEDICAL WARDS.

To each medical ward clerk is allotted a certain number of beds, and he is expected to examine, and write full reports on all patients who are admitted into these. Occasionally it so happens that a patient is too ill to be examined except by the house-physician and physician, or that a case dies or is discharged before the ward clerk has had an opportunity of seeing it. Under these circumstances he should obtain the history, and an account of the symptoms, physical signs, and progress of the case from the house-physician, and should base his report on these data. It cannot be too strongly insisted that a report, however brief, must be written on every case, and it is of the greatest importance that the diagnosis and remarks made by the Physician should be entered at once into the report. Moreover, any errors detected by the Physician or Registrar in the original report should be immediately corrected. In the event of a patient dying the ward clerk must obtain the abstract of the post-mortem findings, and carefully enter it up, and it need hardly be said that all clerks should make every effort to see the post-mortem examination on any case they may have seen during life.

The medical wards are open to clerks from 10 till 12.30 in the morning, and from 1.30 till 5.30 or 6 in the evening. The Registrars begin their rounds at 10.30, and by that time a clerk should at least have full notes of the history of any new patient who may have been admitted into one of his beds; and he should have a full report in readiness for the Physician in the afternoon. Ward clerks should realise that they are expected to know the details not only of their own cases, but of every patient under their Physician. It is no excuse to plead ignorance because "this is not my case." If only a clerk will take the trouble to make himself conversant with each case in this way, he will find at the end of his six months that an enormous amount of clinical material has passed through his hands, and he will probably have acquired enough knowledge of medicine to enable him to pass the Conjoint Final with but little additional reading. But so many men waste their time through sheer laziness in the medical wards, never realising that they are throwing away experience which would prove invaluable to them later on.

An hour spent in the wards after tea three or four times a week will give opportunities, not only for going over cases and writing up reports, but also for seeing the house-physician tap chests and abdomens, etc. The treatment, too, which each case is receiving, may well be studied at this time.

As regards reading, the best method is to study the text-book account of each disease as one comes across it in the wards or in discussion, and afterwards to compare, if possible, the text-book description with the symptoms and signs presented by the patients. At the same time, the most important medical journals should be read

regularly, for by this means only can the student keep himself in touch with modern work.

Books that may be recommended are the following:—The well-known text books by Taylor and Osler, "Medical Diagnosis," by Latham and Torrens (a most valuable work), and "Auscultation and Percussion," by Gee. For second three months ward clerks Dieulafoy's "Text-book of Medicine," the most important monographs in Allbutt's "System of Medicine," and Campbell Thomson's "Diseases of the Nervous System," will prove valuable and interesting reading. For laboratory work Hutchinson and Rainey's "Clinical Methods," or Dr. French's book may be useful for reference.

PATHOLOGY.

As soon as a student has passed his Second Conjoint or M.B. examination, he should begin his study of pathology. Without a sound knowledge of this science it will be impossible for him to obtain any real knowledge of medicine or surgery, and he can, therefore, never be too emphatically urged to attend the autopsies on everyone of his cases, and to spend as much time as possible in the post-mortem room. Autopsies are conducted every day of the week at 2 p.m. (Saturdays at noon). The microscopical examination of material removed by operation, is often the only means of arriving at a definite diagnosis, and it is therefore equally important that the student should obtain an adequate knowledge of microscopical appearances in disease.

Classes on microscopical pathology are held by Dr Laidlaw and Dr. Eyre on Wednesday afternoons and Thursday mornings throughout the year. Bacteriology being taken in October to December and April to June, and morbid histology from January to March and July to September.

In order to learn something of the principles which underlie pathology, the student should attend the lectures on general pathology. In May and October there are also informal classes adapted for the requirements of candidates for the first part of the Third M.B. Cantab., and the final M.B. of Oxford and London Universities.

The best elementary manuals are Green's "Pathology" and Adami and Macrae's "Text-book of Pathology"; Hewlett's "Pathology, General and Special" is good but hardly full enough. For general pathology read "General Pathology," edited by Pembrey and Ritchie, and for morbid histology Grünbaum's "Essentials of Morbid Histology," or Woodhead's "Practical Pathology," of which the illustrations are very good. Many of the articles in Allbutt and Rolleston's "System of Medicine" should be consulted. For bacteriology Muir and Ritchie's "Manual of Bacteriology" is recommended.

BACTERIOLOGY.

Every Guy's man devotes at least three months to the practical study of Bacteriology. This compulsory course comes under the heading of Microscopical Pathology, and is held every Wednesday afternoon and Thursday morning from October to December, and again from April to June.

Bacteriology, although one of the youngest of the auxiliary sciences, has already made a most profound impression upon the theory and practice of both medicine and surgery, and by providing appropriate and specific treatment for bacterial infections has created the demand for exact as well as accurate diagnosis. Consequently, particular attention is devoted in this class to the technique of the various investigations undertaken in connection with the ward work. The student himself stains sputum, pus and morbid exudates by various methods to demonstrate the associated bacteria. He estimates the amount of specific agglutinins or opsonins contained in the serum of patients under treatment in the wards. In addition, he is instructed in the practical work of media-making, culture and staining methods, and is encouraged to repeat for himself during the intervals between successive classes any observations and experiments previously carried out, in order that he may be adequately prepared to take advantage of the advanced classes and lectures which are available during the fourth and fifth years of study, and to equip him for the performance in general practice of those more obvious methods of bacteriological diagnosis, which the past generation of medical men are compelled to entrust to the pathological experts of their own or other hospitals, or, as so often happens, to the various commercial houses which make a speciality of clinical research and diagnosis. Demonstrations are also given upon the life-history of the various organisms pathogenic to the human race, and the changes such organisms undergo or produce when they gain entrance to the human tissues.

In order that the student may make the fullest possible use of his opportunities of correlating the clinical symptoms resulting from the infection of the patient's tissues by various pathogenic organisms, the class in bacteriology should be taken out as early as possible during the period of clinical study, and the work has so been planned that the whole of the six months devoted to microscopical pathology may run coincidently with the appointment of medical or surgical clinical clerk: and it should be emphasised that the clerk's absence from the wards during the hours the class is being held is not only sanctioned, but, indeed, is expected by his chiefs.

During February and March of each year a course of lectures is given dealing even more specially and technically with the applications of bacteriology to practical diagnosis and treatment, and in these the various remedial agents (serums and vaccines) which have been elaborated in the bacteriological laboratory for the treatment of disease are fully discussed, together with the facts and theories relating to natural and acquired immunity upon which bacteriological therapy is based.

THE SURGICAL WARDS.

In the surgical wards there is a division of labour, and corresponding to this division, the appointments fall into two classes—clerking and dressing. The student's first introduction to clinical work is as clerk in the surgical wards, and it is not unlikely that he may, on his first entry, be a trifle discouraged. The reasons for this are obvious. Entirely ignorant of surgery and even of the terms in common use, he is at once required to write full accounts of the cases admitted to the wards. He will find, however, that, with the assistance available at his disposal, his difficulties will be found to be anything but insurmountable.

The most important point for a clerk to remember is that in after years cases and not book work will form his mainstay in practice, and that he cannot too soon get the clinical entity and results of treatment into his memory.

Let him bear in mind that to him is given by the hospital the task of keeping its records. These are bound and kept, and by his work thus perpetually in evidence, a man is judged. Bad reports are a lasting disgrace; good reports a lasting honour. There is no better way of impressing the facts of a case on one's mind than is gained by the construction of a correctly detailed report, which, moreover, will be of value if the case has to be referred to at a future date. The importance of good careful work by the clerks cannot be over-estimated. In the nature of things it cannot be perfect, but it must be as perfect as he can make it. By his first work in the wards he will be judged, and he will find that it is very hard to live down a bad clerkship. At the same time that he bears in mind the difficulties and responsibilities of his post, he should remember that he is a junior, and that any assistance he can lend his seniors should be offered ungrudgingly, and in return for this he will undoubtedly meet with that consolation and help in his work which is so necessary.

It is essential that either the clerk should live within walking-home distance of the hospital, or else get a room for the take-in week. All really good casualty work is done at night, and the periods for seeing the actual application of plaster splints, the reduction of fractures, the immediate treatment of all kinds of urgent cases, is all too short as it is. A man who is appointed as clerk to an assistant surgeon should attach himself, during take-in week, to the corresponding full surgeon's firm, and work with its dressers and clerks in the surgery and theatres.

As soon as he is appointed, the Surgical Ward Clerk should obtain from the Medical School office a copy of the "Notes on Surgical Case-taking," and peruse it most carefully. It contains a wealth of information upon the duties of the appointment, and upon the kind of information which has to be elicited from the patients. A day or two before he actually has to undertake his new work, the clerk will meet the surgical registrar, who will instruct him further as to his precise duties, the mode of taking and indexing reports, the mode of dealing with pathological and bacteriological reports, and all the other duties appertaining to his post. He should then learn from his predecessor what he can about the cases he is to take charge of, so that the work may be continued as nearly as possible without a break. There is an entire change of clerks every three months, but in the way indicated above, the break in the work may be obviated to some extent. He should learn quickly to take accurate pulse and respiration rates, and test urine, for without any exception the temperature, pulse and respiration rates, and condition of the urine must be included in the notes of every case on admission. The surgical registrar sees every new case with the clerk on the morning after admission, when he expects a history of every case to be ready. This, if vague, is useless. All symptoms should be set down in exact order, with the dates of their appearance.

The surgeon's diagnosis, and the reasons for it, should always be recorded, and the exact condition found at operation, if such be performed. It must be remembered that the condition of every part investigated must be noted down, and not only that of the particular viscus affected. In many cases, patients return after some while, and it is very desirable to have a detailed record of every viscus examined. Negative points, too, should be noted, as well as positive findings. Thus in a laparotomy it is quite as important to state that the stomach and duodenal seemed normal, and that no gall-stones were present, as to say that a normal-looking appendix was excised.

The exactness in detail is of the highest importance, and is a measure of the care with which the clerk has done his work. He should have a note-book, and should put down in it everything about the case that he can obtain from the surgeon, house-surgeon, clinical assistant, and dresser. This should be copied into the report as soon as possible. We would impress upon each clerk the value of seeing everything done by the dressers or house-surgeons—the operations, putting up fractures, especially when done at night in take-in week, and this should apply to manipulations on every case under the surgeon, and not only to the cases which the individual clerk has to report—as much may be learnt in this way which otherwise can only later be gathered with much greater effort.

He should also attend the practical surgery classes of the surgical registrar, who gives four courses a year, each beginning on the appointment of the new surgical ward clerks, and especially designed for their instruction in all matters relating to that appointment, and also the course of practical pathology which is then in progress.

Lists of the duties appertaining to each appointment are supplied to the students, and these are to be carefully followed out. The hospital not only expects this, but insists on it. We have laid stress so far on the appointment of surgical ward clerk, as it is the first post that

the student holds, and because he is so often quite unaware of the objects of the appointment.

The surgical wards are visited every day by the surgeons and assistant surgeons at 1.45. Notice of operations, which daily take place except for emergencies, is posted overnight in the colonnade by the House-Surgeon for the week. The surgeons are assisted at the operations by the dressers, and the particular clerk to the case should remain close by throughout the whole operation.

Although we believe there is no rule which prevents freshmen attending operations and clinical demonstrations, we would point out that such a course of action is useless to them, and is not encouraged by the authorities.

DENTAL SCHOOL.

The dental student is supplied at the Medical School Office with the Prospectus, Standing Orders, Notes on Probationary Work, List of Instruments, Calendar, and Clubs' Union Book.

These pamphlets should be carefully read in order that acquaintance may be made with the general arrangements of the school and the scope of the work upon which the student will become engaged.

Instruments having been purchased at a dental depôt, the student should satisfy himself that he has been supplied with all of those described in the hospital list.

Probationary work upon the phantom head will occupy the time for about two months. This operative course, conducted by the staff demonstrators, is very comprehensive. It includes most of the conservative operations that the student will subsequently be called upon to perform upon patients, namely, gold and other fillings, crowns, inlays, and the treatment of devitalized and septic teeth. These manipulations upon the dummy, when done in a thoroughly sound manner, form an excellent ground-work in operative dentistry.

Pupils in Dental Mechanics are received at the hospital, and a systematized and graded course of instruction is carried out by competent teachers.

The regulations of the Royal College of Surgeons of England require that students shall pass two professional examinations for the dental licence. At the first examination certificates must be produced, *inter alia*, of having been engaged in the practice of dental mechanics under a registered dental surgeon, or under the direction of the superintendent of the mechanical department of a recognised dental hospital, during a period of two years, and of having manufactured and adjusted six dentures and six crowns.

As this examination may be passed in the month of May, the work of the first winter session should be largely devoted to demonstrations, dental mechanics, and lectures.

Students in difficulties about their work and needing advice are invited to consult the Dean, or any member of the Staff, who will be pleased to do what they can to promote the interests of students.

SPECIAL DEPARTMENTS.

There are at present ten special departments in the Hospital, namely, Throats and Ears, Eyes, Skins, Gynæcological, Nervous, Children, Actino-therapeutic, Electro-therapeutic, Orthopædic and Genito-urinary. In all these departments the latest methods of diagnosis and treatment are to be seen, and much valuable information may be gained by the student.

Instruments.

In the dissecting-room and physiological laboratory, the student will require a set of instruments. This consists in some scalpels (the best being those made entirely of steel), a pair of non-toothed dissecting forceps, a large and a small pair of scissors, a probe, a blowpipe, a set of chain-hooks, and a small oil-stone on which to sharpen the knives. In addition, the various accessories for microscopical work will be required, viz., a gross of glass slips, an ounce of small and large cover glasses, a bottle of Canada balsam. three needles mounted in handles. and a box in which to keep the finished slides.

The dissecting instruments can be procured from any of the big London Makers; Messrs, Down Bros., opposite to the main entrance of the hospital, have a large and very varied stock from which one may select, whilst other famous firms are:—Allen and Hanbury, Wigmore Street; Maw and Sons, Aldersgate Street; Bailey, Oxford Street, and the Holborn Surgical Instrument Company, Thavies Inn, Holborn Circus. The latter firm sell some instruments that are rather less expensive than the usual ones. Microscopical accessories can be procured from Messrs. Stanley, London Bridge Railway Approach, or from Baker, of 244, High Holborn, or from Watson and Sons, of 313, High Holborn: all these firms not only hold a large stock of these necessaries, but are also specialists in all kinds of optical apparatus, e.g., microscopes, blood-counting apparatus, ophthalmoscopes. cystoscopes, spectroscopes, etc.

In the surgical wards, a new set of instruments will be required. As a surgical ward clerk, the student will only need a steel 60-inch tape, a skin-pencil, and a pair of ordinary round-nosed scissors, for cutting off dressings. A stethoscope, though occasionally desirable, is not really necessary to him, and its choice had much better be deferred until he becomes a medical ward clerk, when some skilled person will assist him in the choice of the most appropriate kind. When the student attains the dizzy eminence of a dresser, he will need a full set of

dressing instruments, which comprises:—2 or 3 Spencer-Wells artery forceps; a pair of dressing scissors; a sinus-forceps; a scalpel and abscess knife, combined; a trocar and cannula, for hydrocoeles; a probe; a caustic holder; some curved and straight cutting needles, including a few of small size; a Bryant's dressing forceps.

In addition, it is very useful, though not absolutely essential, to have a pair of fine-pointed scissors, to be kept for the sole purpose of removing stitches. All these instruments should be of the finest quality procurable, as otherwise they will never withstand the rough and constant use to which they will be subjected in two or three years' work in the wards. In the medical wards, and in the eye wards, an ophthalmoscope is practically a necessity, and the student is strongly advised to consult one of the Staff before purchasing one; an inferior instrument costs but little less than one of the best, and is often a constant source of annoyance, even if it be not quite useless. A first-class "Morton" is the only kind worth having.

Since the war the cost of microscopes has gone up very considerably, and in many cases it is difficult to purchase a new instrument. The student will do well to consult his teachers before making a purchase. Probably a good second-hand microscope will be found sufficient by many. Messrs. Millikin and Lawley in the Strand usually have a good stock of second-hand microscopes, lenses, etc.

Books.

The student who wishes to obtain his books at once should not take the first he sees on any particular subject, but would be wise to consult his demonstrators first; the number of text-books is very large, and the choice is a difficult matter to the inexperienced. Roughly speaking, second-hand books are very seldom worth anyone's while to buy, chiefly because medical science is progressing so rapidly that new editions are constantly being published.

The number of publishers of books for medical students is great. Messrs. Churchill publish Taylor, Jacobson, Goodhart, Fagge, and many other well-known works. Messrs. Macmillan publish Allbutt, Foster, and a great number of first-year books; Messrs. Longmans, Green & Co. publish the famous Gray's Anatomy. Mr. H. K. Lewis, 136, Gower Street, publishes a number of medical books, and has also a medical circulating library which is valuable to students who wish to see all the latest books. Mr. Murray also publishes many well-known medical books, as also do Smith, Elder & Co.; Philip & Son; Cassell & Co.; Nisbet & Co.; and Baillière Tindall & Cox.

All books can be obtained from Mr. H. H. Grattan, in Borough High Street, who is the "official bookseller" to the hospital. Many well-known books he can supply over the counter; any others desired he will have in an hour or two.

Osteology.

The question of the purchase of bones is always an important one. Millikin & Lawley, in the Strand, make a speciality of supplying the medical student with this part of his equipment.

Guy's Hospital Clubs' Union

THE FORMATION OF THE CLUBS' UNION, by the amalgamation of the various constituent institutions, took place in the summer of 1891. The objects of the amalgamation are to further the interests of the clubs and societies existing at the hospital by their mutual support, and to simplify the collection of subscriptions. By the payment of an annual subscription (see Clubs' Union Year Book, p. 13) to the Clubs' Union, any student of the hospital can obtain the privilege of membership of the constituent institutions.

THE GROUND OF THE CLUBS' UNION, which is under the control of the council, is situated close to Honor Oak Park Station, on the London, Brighton and South Coast Railway, and to the Crofton Park Station on the South Eastern and Chatham Railway. It is nine acres in extent, and is the headquarters of the Guy's Football, Cricket, Athletic and Lawn Tennis Clubs. Return tickets at single fare are issued by the Brighton Railway Company. Under such restrictions as are found necessary by the committees of the several clubs, and are approved by the council of the Clubs' Union, every member of the Union has opportunities of practising and taking part in matches, and in the various sports and games. There is a large pavilion upon the ground, with dressing and lavatory accommodation. Refreshments can be obtained by members of the Union according to the tariff of the Students' Club.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

SINCE our last issue London has been subjected to some half-dozen night aeroplane raids. Luckily the casualties have not been heavy, and though preparations were made for the reception of large numbers of wounded, the cases admitted have been very few.

Though the effects of the raids have been insignificant as far as casualties and material damage are concerned, they cause a great deal of inconvenience and loss of sleep. For the past week a large proportion of the inhabitants of the Borough have carried out a nightly migration to the tubes and the arches under the railways. Even on nights when there are no warnings travelling by tube has been almost impossible owing to the crowds in the corridors and on the platforms, where the atmosphere and conditions are indescribable. Under the railway arches off Tooley Street whole families of men, women and children are to be seen encamped from about dusk until midnight.

Notices have now been posted outside the various entrances to the Hospital warning the populace that they cannot be accommodated in the Hospital during raids, and these have had a salutary effect in keeping the Surgery and Out-Patient Departments clear.

Though no bombs have fallen anywhere in the immediate neighbourhood of the Hospital, a fair number of bits of shrapnel have been picked up in the vicinity. The anti-aircraft guns, especially one in close proximity, sound extremely alarming, but throughout the patients have behaved most admirably.

It is difficult to avoid thinking that the population of the Borough have been unduly alarmed by the raids. The chance of a direct hit on a house is extremely minute and it seems almost inconceivable that people should be willing to undergo the horrors of six hours in a tube, where incidentally some have been crushed to death, in order to avoid the remote risk of a bomb.

SOME months ago we were able to announce that attendances at lectures need no longer be signed up for admission to the final Conjoint examinations. This step has been taken as much in the interests of the diminished teaching staff as in that of the students. We understand that as Clinical lectures are still being given, students are expected by the Medical School to attend a certain number of these, if they wish to be signed up for their appointments. The lectures which are now no longer compulsory, are the systematic courses.

What has always seemed to us a reasonable view on the subject of signing-up has been that

which has long been held by the Faculty of Medicine at Oxford. For their examinations no attendances at lectures have ever heen compulsory, but a candidate has to be signed-up for laboratory and practical work. If a man gains the requisite theoretical knowledge to pass an examination it is difficult to see why it matters whether he gains it from books or from lectures. We fear that many find themselves habitually overcome by sleep at any and every lecture, and for such compulsory attendance is pure waste of time.

The diminished number of students has caused a serious loss of revenue to the Medical School. This has partly been compensated for by the fact that the teachers have very generously allowed their salaries to be cut down. We regret to say that in a few instances students have not behaved equally generously. Cases have occurred where the Medical School has allowed men to continue their work without paying their fees at the time on the understanding that when they qualify and are in a position to earn a living they will repay the School the fees due. In some cases it has proved difficult to collect these fees, even from men who are earning a considerable income in the R.A.M.C.

It is difficult to conceive that any old Guy's man could behave in so despicable and mean a manner. The financial loss to the Medical School is, of course, not a serious consideration, but the fact that the generous behaviour of the School has been exploited is bound to render it more difficult for the School authorities to make concessions in deserving cases in the future.

A pleasant contrast is afforded by an old Guy's man who attended the course of instruction in Venereal Diseases held recently, and though he was told no fees were charged, insisted on presenting the Medical School with a cheque.

We would like to impress on our readers that the financies of the Medical School and of the Hospital are entirely separate and that it is considerably easier, as a rule, to obtain funds from the public for the latter rather than for the former. There must be many old Guy's men who in these times of war find themselves making their wills. It is to be hoped that many of them will remember with gratitude their Alma Mater.

It would appear that for the third month in succession there is to be no take-in for Sir Alfred Fripp. In these days of depleted works department staff it is difficult to carry out repairs expeditiously, but it seems a matter for regret that Luke and Charity Wards should have been closed so long. A number of dressers have been appointed to Sir Alfred's firm, and the loss of a month in their three months' appointment is a very serious handicap.

Our remarks last week on the subject of Medical Education have brought us an interesting article from a correspondent which we print in another column. His suggestion that the State should give a number of scholarships for medical students is indeed a most admirable one. We doubt, however, whether we are ever likely to live to see a Government sensible enough to make such a grant. There is always the difficulty that some demagogue will raise an outcry that the rich are being educated free at the cost of the poor. We thoroughly agree with our correspondent's suggestion that a voluntary fund should be started to endow scholarships especially for the sons of medical men who have fallen in the war. We presume that sooner or later the question of some war memorial for the Guy's men who have fallen

will arise, and we doubt if any more lasting or useful memorial could be made than the foundation of several scholarships for the sons of old Guy's men or others who have fallen. Whether the war at present be nearing its end or not, it would be a most excellent thing to open such a fund at once, and we have no hesitation in offering the suggestion to the Treasurer and Governors of the Hospital.

The Cheapening of Medical Education.

The valuable leading article in the educational number of the Guy's Hospital Gazette deserves serious attention and raises several interesting points. Nothing could be more admirable than your protest against the proposal made by the *Lancet* that medical students should begin to specialise in their education at the age o 16. If once such a proceeding were adopted we should seriously handicap the youth who, having pursued the normal education of boys of his own class, was not attracted towards medicine as a profession until he reached the usual age for leaving school and passing to the university. This handicap would undoubtedly tend to lessen the number of such men entering the profession, and would probably more than counteract any effect upon numbers generally that might be produced by the supposed economy of early specialisation. A further disadvantage of such early specialisation would be the narrowing of outlook which would be induced by it. Medical education and medical practice are sufficiently narrowing as at present carried on, and we should therefore strive to give all medical practitioners the advantages of the widest possible general education before commencing their special studies. In this endeavour we should steer clear of the internecine quarrels between the supporters of classics and science as the appropriate subjects of general education. Your protest appears, quite properly, to be against the too early adoption by students of any form of school education supposed to be specially applicable to those who intend ultimately to study medicine.

You and the Editor of the *Lancet* are both right in recognising that in the near future measures must be taken to encourage a speedy return to the normal entry—if not to an increased entry—of students into the medical profession. The cheapening of medical education without any diminution of its length or standard would seem to be a first necessary step. The stringency of money which must inevitably follow the war, will undoubtedly lessen the number of parents who can contemplate the cost of medical education as at present carried out. You hint at the possibility of increased grants to medical schools by the Board of Education as a means of lessening the cost. These grants might well be doubled and trebled without providing for the whole of medical connection in Great Britain as large a subsidy as in the past has often been provided on the continent for the medical department of many a university of a single Provincial town. It is doubtful however, whether, if such an enhanced subsidy were extracted from the British Government, a material diminution in the students' fees would result. As you doubtless are aware it is a unique feature of medical education in this country that almost all the teaching of the advanced subjects of the curriculum is now carried on without any direct remuneration to the teachers. The present State subsidies to medical schools have been chiefly used to remove this anomalous position, and even if the subsidies were greatly increased it would hardly be possible to provide for teachers of medicine and surgery remuneration in any way proportionate to the work undertaken or to the remuneration received by professors and lec-

turers on subjects of similar importance in the university curriculum.

Without in any way interfering with the inevitable gradual increase in the number of schools receiving the Board of Education grant or with the gradual increase in the amount of the subsidies, there is, however, another direction in which your desire to see medical education made less costly might be met. The provision of national scholarships for certain students desiring to enter medicine whose parents are unable to pay the fees would be an effective way of cheapening medical education that should materially increase the number of entrants. The choice of students to receive this cheaper or possibly in some cases free education, would be a matter for careful consideration. There at once jumps to the mind the possibility in this way of alleviating some of the hardships the war has brought to large numbers of men who have been fighting for their country. Many young officers about to enter medicine or some other profession at the outbreak of war will find themselves when peace is declared incapable of facing the combined expenditure of time and money entailed in pursuing their intentions. For such the offer of free medical education at the cost of the State might be an ideal recompense for all their sacrifices. Many widows of medical men killed in the war might see in the offer of free medical education for an orphaned son the only opportunity of carrying out the well-known wish of her dead hasband that his child should follow him in his profession.

It is always a hard task to persuade the Government to take on an enterprise of this character, and undoubtedly the Government will have many difficult post-war problems to contend with. Something might, however, be done at once in the direction indicated by private enterprise, thus setting an example to the State. The governors of some of our medical schools might be induced to invite contributions to a fund to provide a small number of such free educational scholarships in their own schools. To such a fund parents who by the war have been deprived of the opportunity of spending money on the education of a son who has been cut off at the beginning of his university or professional career would willingly contribute. No better recipients of such a scholarship could be found than the orphaned sons of some of the old students who have fallen in the war. What better memorial of its special effort in the war could Guy's have than free education for the sons of Guy's men who have given their lives for their country? S.

Appointments.

R.N.M.S.

The following appointments have been made:—

Staff-Surgeons:—C. H. Dawe to the *Sirius*; F. C Robinson to the *Forward*.

R.A.M.C.

To be temp. Major.—Capt. C. R. Nicholson.

To be temp. Captains.—Lieuts. W. J. Wormald, R.E.(T.F.), H. P. Aubrey, V. R. Dyke, G. G. Ellis, E. C. Dimock, D. G. Wearing, R. C. Mullins (S.A. Medical Corps).

To be temp. Lieuts.—N. Garrard, C. H. Rippmann.

Army Dental Appointments.

The following have been appointed Army Dental Surgeons;—F. L. Aubrey (from Training Centre); A. P. Marsh; G. V. Dymott (from A.O.C.)

I.M.S.

Captain to be Major.—C. H. Reinhold.

Civil.

Whitfield Harris, L.D.S. Eng., M.I.H. (St. John's Ambulance Certificate) has been appointed Lecturer by the British Red Cross Society.

Papers by Guy's Men.

John D. Malcolm. M.B., C.M. Edin., F.R.C.S. Edin.: Unusual renal calculi with severe hæmorrhage as the only important symptom.—The *Lancet*, Sept. 22nd, 1917.

Syphilis of the Nervous System in Soldiers.

CLINICAL LECTURE BY Dr. ARTHUR HURST.

Gentlemen,—There must be a stage in the development of general paralysis and tabes, in which the spirochætes have invaded the central nervous system, but the patient has not yet noticed any symptoms. This explains the occasional discovery of latent tabes in the examination of patients with aneurysm and of apparently healthy individuals for life assurance or other purposes : the pupils may not react to light or the ankle-jerks may be unobtainable, and further examination shows that the cerebro-spinal fluid contains excess of lymphocytes and gives a positive Wassermann reaction, whilst the blood still gives a negative reaction.

When men affected in this way are exposed to the excessive strain of active service, instead of simply becoming neurasthenic, they rapidly develop tabes or general paralysis.

Latent tabes developing acutely as a result of excessive fatigue.—A colonel, who went out with the original expeditionary force, regarded himself as perfectly fit, though he had occasionally suffered from pains in the legs, which had been ascribed to rheumatism and neuritis. He had an exhausting time during the great retreat, and was invalided home directly afterwards. I found that he was suffering from severe tabes, which had doubtless been present in a latent state before, but had become acute as a result of over-fatigue. With rest and active anti-syphilitic treatment he has improved greatly, but he has not been able to return to duty.

Tabo-paresis developing during active service.—Private J., aged 38, had syphilis ten years ago. After having been in the trenches at Salonika for some months, he became strange in his manner, doing foolish and dangerous things. On claiming to be the commander of an army corps, on October 31st, 1916, he was sent into hospital. He had incontinence of urine both by day and night, but said that the urine was sweat. His pupils were unequal and reacted sluggishly; his tongue and facial muscles were tremulous. The right knee-jerk was absent and the left was only obtained on reinforcement ; the right ankle-jerk was obtained with difficulty and the left was normal. The vibration sense was very deficient over the sacrum and malleoli, a sign which Captain J. L. M. Symns has shown is strong evidence pointing to the presence of tabes.

When admitted on December 14th his mental condition had much improved, but the physical signs were unaltered. The Wassermann reaction was strongly positive and a diagnosis of tabo-paresis was made. He was given salvarsan, mercury and iodide. By January 20th the ankle-jerks had become normal, the right knee-jerk was easily obtained and the left was slightly exaggerated. The tremor of the lips and tongue was less marked, and the patient's mental condition was quite normal, but Captain J. L. M. Symns found that he still had the characteristic loss of sensibility to a tuning fork placed over the sacrum. In spite of continued treatment the Wassermann reaction was still positive on February 23rd, but the patient's general health was now excellent, and there had been no return of mental symptoms. He was discharged for military employment in March.

General paralysis developing on active service in an apparently healthy man.—A storekeeper, 33 years old, enlisted in March, 1915, and went to France in a labour battalion the following June. He had never done any hard work before, and the constant difficulty he found in avoiding reprimands and punishment for the non-performance of work which was beyond his strength was a constant source of worry to him. He carried on until December, 1916, when he was sent home as being no longer of any use. He was mentally very dull and his memory was much impaired. The only physical sign of disease was a very characteristic slurring speech, which was accompanied by incoordinated movements of the lips; a diagnosis of general paralysis was made, and this was confirmed by the positive Wassermann reaction of his cerebro-spinal fluid, the reaction of the blood being negative. Great improvement followed with mercury, iodides and eight injections of salvarsan. By the beginning of February he was brighter mentally and his memory had improved; he was much stronger physically

and enjoyed digging in the hospital grounds. His speech was slightly better, but was still very slurring.

Exposure of a man with incipient, but still latent, tabes or general paralysis to the physical effects produced by the explosion of a powerful shell in the near neighbourhood is even more likely than simple physical and mental fatigue to cause these diseases to become suddenly obvious, at the same time as it gives rise to the composite clinical picture of primary organic and secondary hysterical symptoms, which is known as shell-shock.

Tabes developing with shell shock.—Private D., aged 31, fought in the retreat from Mons, and was blown up by a shell and buried in May, 1915. He returned to the front after being home two months, and remained well till he went into action in December, 1916, when he was knocked unconscious by a shell. He came to himself two days later in hospital, but he was still confused and lethargic on reaching England on the 21st. His mental condition then improved and in a few days was normal. His legs were still weak and he could only walk a few paces very unsteadily. His right pupil was irregular in outline, eccentric and much larger than the left; it reacted neither to light nor accommodation. The left pupil did not react to light, but reacted normally to accommodation. Very early primary optic atrophy was present. The right knee jerk was slightly exaggerated (6), the left was normal (4); both ankle-jerks were normal. The vibration sense was much reduced over the sacrum and malleoli. The possibility of tabes was confirmed by the positive Wassermann reaction of the blood and cerebro-spinal fluid. With rest, mercury, iodide and seven injections of salvarsan he improved rapidly. By the middle of February he could walk quite well, and felt almost as fit as before he was blown up. On March 17th the right pupil reacted to accommodation, but was still inactive to light, irregular in outline and larger than the left, which now reacted slightly to light as well as to accommodation.

Most cases of tabes and general paralysis in soldiers are due to the lighting up of latent and incipient disease as a result of the stress and strain of active service and the concussion caused by shell-shock, but it is not unreasonable to suppose that the same factors may so lower the resistance of the central nervous system that these diseases may develop in a syphilitic man, whose nervous system has not hitherto been invaded by spirochætes.

There can be little doubt that in syphilitic subjects shell-shock and the concussion of the spine produced by burial under collapsing parapets may be the direct cause of cerebro-spinal syphilis, in which the nervous system is attacked from the blood-stream by way of the meninges and blood-vessels, as distinct from the parenchymatous syphilitic diseases, such as tabes and general paralysis.

Cerebral syphilis developing with shell shock.—Corporal B., aged 26, was blown up by a shell on September 7th, 1916. He was admitted on the 13th in a dazed condition. The right pupil was much larger than the left, and symptoms of left-sided organic hemiplegia were found. There was a superficial abrasion of the scalp in the right parietal region. He had had syphilis ten years before and the Wassermann reaction of the blood was strongly positive. The general symptoms and hemiplegia gradually disappeared with rest, salvarsan, mercury and iodides; on December 12th he had still some weakness of the left side with exaggerated jerks, absent abdominal reflex and extensor plantar reflex, but he had otherwise almost recovered. As the Wassermann reaction was still strongly positive, he was given more salvarsan, mercury and iodide. On January 6th, 1917, there was no appreciable weakness of the left side, the plantar reflex had become flexor, the abdominal reflex had returned, and Babinski's second sign (combined flexion of the thigh and pelvis) was the only evidence of organic disease. With further anti-syphilitic treatment this also disappeared, and the only physical sign remaining on February 28th, when he was discharged fit for light duty, was inequality of the pupils, but the Wassermann reaction was still positive, and he had a complete blank in his memory from the time he was in the trenches just before he was blown up until he found himself in hospital about four weeks later.

The following case shows how an actual wound of the head may be the exciting cause of general paralysis.

General paralysis developing acutely after a wound of the head.—Private I., aged 31, was perfectly fit until he was wounded on December 7th, 1916, by a small fragment of shrapnel, which entered his skull two inches behind the left ear and lodged in the brain one inch above and two and a half inches behind the middle of the right orbital margin. When admitted to Netley on December 30th he had complete internal and external ophthalmoplegia of the left side with the exception of the external rectus with complete paralysis of the superior rectus and partial paralysis of the inferior rectus and levator palpebræ superioris of the right side; the left side of the face was also paretic, but there was no paralysis or anæsthesia elsewhere. The knee-jerks were equal, the epigastric and abdominal reflexes absent, and the plantar reflexes flexor, though the right one was said to have been extensor at the Clearing Station. The optic discs were normal. The patient was at first in a stuporous condition and had incontinence of urine and fæces for two days. Shortly after admission he began to answer questions in a slurring and indistinct voice after a long latent period. As it was clearly inconceivable that the shrapnel fragment should have caused the isolated lesions of the third and seventh nerve nuclei without injuring any of the ascending and descending tracts of the crus, quite apart from the fact that the track it had taken must have been entirely above the crus, we thought that the concussion it had produced must have lit up some latent syphilitic disease. This view was strengthened by the positive Wassermann reaction obtained with the cerebro-spinal fluid, that of the blood being negative. Considerable improvement in the mental condition and some diminution in the degree of paralysis followed treatment with iodide and mercury. The speech now is very suggestive of general paralysis; his mental condition favours the same diagnosis, as he is extremely pleased with himself and says he has never been in better health, in spite of his disabilities.

Epilepsy is, I believe, an exceedingly uncommon result of the stress and strain of active service and even of true shell-shock, unless the man has suffered from it in childhood or has epileptic relations. When fits occur in soldiers apart from these predisposing conditions and apart from actual head injury, it almost invariably proves to be hysterical and not true epilepsy at all, unless it is syphilitic in origin. I believe that syphilis may give rise to a form of true epilepsy without other symptoms, but in most syphilitic cases the convulsions prove to be the first manifestations of commencing general paralysis. I therefore make it a rule in all cases of epilepsy occurring in soldiers, who have not previously suffered from it, to test the Wassermann reaction of the blood and cerebro-spinal fluid. A thorough examination for early physical signs of organic nervous disease should, of course, also be made.

From what has been said it is clear that the possibilitiy that syphilis is a factor should be considered in all cases of nervous disorders in soldiers, even when there is an obvious exciting cause such as painful emotions or shell-shock. The presence of abnormality of the pupils, absence or diminution of the ankle or knee-jerks, tremor of the lips or tongue, are particularly suggestive symptoms and indicate that the cerebro-spinal fluid should be examined as well as the blood for the Wassermann reaction.

Treatment.—Active anti-syphilitic treatment should be given in every case in which the Wassermann reaction is positive, even if it is uncertain whether syphilis is wholly or in part the cause of the symptoms. I begin with two drachms of iodide and four drachms of liq. hydrarg. perchlor. a day; a week later mercurial injections replace the mercury given by mouth and a course of salvarsan injections is begun. If severe cerebral symptoms are present, the latter should be postponed until the mercury and iodide have produced a certain amount of improvement. Intrathecal injections of sal-

varsan are not only theoretically irrational, but in practice they produce less good results than intravenous injections, and they occasionally give rise to spinal meningitis and thus actually aggravate the condition.

The disposal of soldiers suffering from syphilitic disease of the nervous system is a matter of considerable difficulty. It is probably unwise to allow any man who has had definite signs of his nervous system being affected by syphilis to return to active service abroad, even if apparent complete recovery has occurred and the Wassermann reaction has become negative, because with the strain of active service relapses are likely to occur. There is, however, no reason why he should not be given military employment at home, and I know of several men suffering from commencing tabes, which has improved or been arrested with treatment, as well as men who have recovered from various forms of cerebro-spinal syphilis, who have been able to carry out their military duties efficiently without suffering from any return of symptoms.

Men suffering from general paralysis, on the other hand, however much they appear to have improved, are almost certain to relapse, unless they live a particularly protected life, which would be impossible if they remained in the army.

Change of Address.

Bt. Lieut.-Col. C. H. Fagge, R.A.M.C., 4th C.C.S., 5th Army.

Lieut. J. Allan Berry, N.Z.M.C., attached 11th Argyle and Sutherland Highlanders, to No. 2 N.Z. General Hospital, Walton-on-Thames.

Surg.-Prob. H. W. Eddison, H.M.S. *Theseus*, c/o G.P.O.

Lieut. A. P. Marsh, L.D.S., R.C.S., Dental Hut, Prees Heath, Whitchurch, Salop.

Surg. M. Pearson, R.N., H.M.S. *Renown*, c/o G.P.O.

Notes on a Case of Angio-Neurotic Œdema.

Leading aircraftsman H. W., aged 27, R.N.A.S., was admitted to this hospital on June 7th, from R.N. Hospital, C——, diagnosed as urticaria.

His family history teaches us nothing.

Previous history.—He reported at the Sick Bay on January 1st, 1917, complaining of indigestion, for which he was treated for eleven days, remaining at duty.

Present illness.—He first reported sick on 25th May, 1917, complaining of large red, irritable and burning patches, the condition being diagnosed as urticaria. As he did not respond to treatment he was forwarded, on May 31st, to R.N. Hospital, C——, for further treatment and observation.

Extract of report received with him.—"Patches of urticarial rash have made their appearance in various parts of the body, causing considerable burning and irritation, *especially at night time.* He has been constipated for some time and has no appetite."

On admission to this hospital he was found to be in a debilitated state, and suffering from a rash. This rash consisted of patches varying in size from that of a sixpence to the palm of one's hand, and general in distribution. The smaller patches were red and slightly raised from the surrounding surface, whilst the larger areas more resembled mosquito bites, in that they were definitely raised, brawny, and included the whole thickness of the skin. Their common features were—

(1) Extreme irritability and burning

(2) Hot to touch.

(3) Irregularity of contour, but with a definite edge.

(4) *Nocturnal appearance.*

(5) They would fade away, the smaller ones in the course of twelve hours or so, the larger taking about twenty-four hours completely to disappear. As one crop would be disappearing so another would make its appearance, or he might be free from two to three days.

On three occasions the mucous membrane of his mouth has been affected, having been definitely œdematous. Nothing abnormal has been found physically excepting a tendency to constipation.

Bacteriological examination of fæces and urine gave the following results :—

Fæces.—Cultures gave a growth of Bacillus coli and Streptococcus brevis.

Urine.—No pus, casts or micro-organisms detected in the specimen. No albumen.

He has had no vomiting, diarrhœa, colic, thirst or temperature since admission. His tongue has always been clean. He volunteered the statement that the patches are more liable to appear when he is worrying about himself than when his mind is pre-occupied.

The condition has improved considerably, although the patches still make their appearance, but not as frequently as heretofore, and much less severe in type.

Treatment.—Various forms of medicinal treatment have been tried, such as—

Salol grs. v. t.d.s.
Cyllin ♏. iij. t.d.s.
Calcium Lactate grs. v. t.d.s.
Ichthyol ♏. iij. in capsules t.d.s.
and Mist. Sodii Sal. oz. 1 t.d.s. (G.H.P.)

He made no improvement with any of these forms of treatment. At present he is having—

℞ Tinct. Valerian Ammon. ʒss.
Sodii Brom gr. v.
Spr. Ammon. Aromat. ♏. xx.
Liq. Arsenicalis ♏. iv.
Aqua Menth. pip. ad. ʒss. } ʒss. t.d.s.
Cyllin Palatinoids (keratin coated) ♏. iij. t.d.s.
and aperients.

Under this latter treatment he has undoubtedly improved, but I am unable to say whether this improvement is due to—

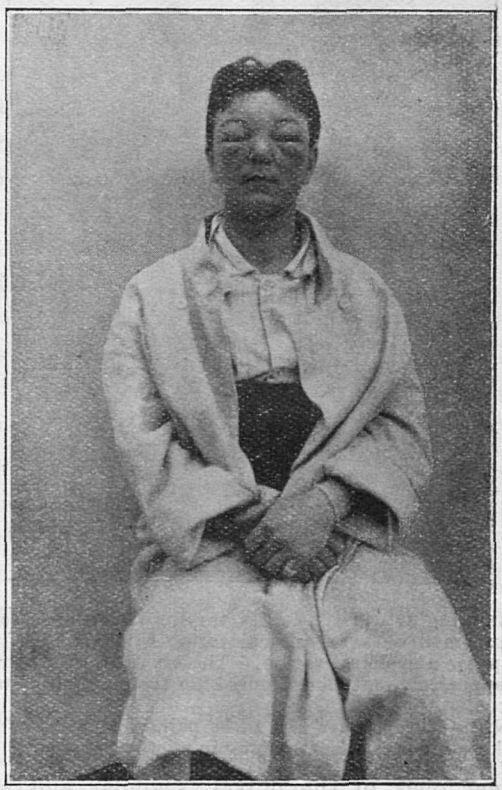
(1) The tonic and anti-neurotic effect of the mixture,

(2) The intestinal antiseptic value of the cyllin,

(3) The effect of aperients, or

(4) The combined result of (1), (2) and (3).

I have been fortunate enough to obtain photographs of the case during one of his worst attacks in this hospital, and which accompany these notes. They were taken at 11 a.m. on August 6th, there being no signs of rash about his body on retiring to bed the previous night. His eyes were quite normal. He, however, was very worried about the constant appearance of the rash.



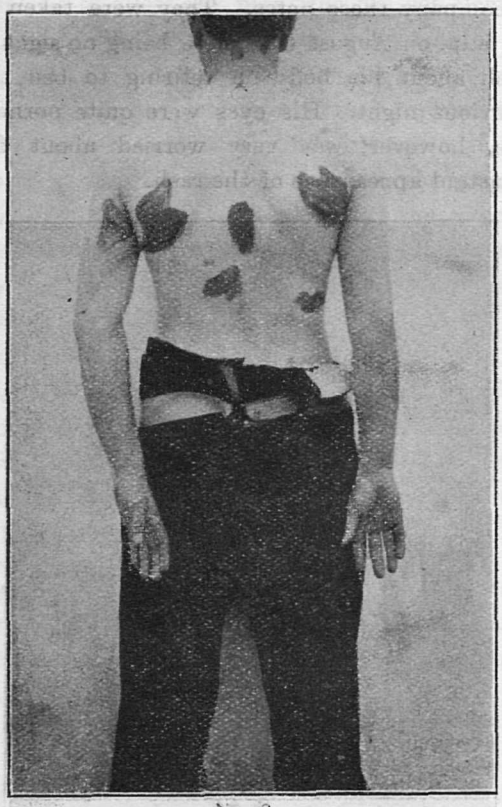
No. 1.

Showing œdema of eyelids, which came up during the night. Almost clear in twenty-four hours; quite clear in forty-eight hours after photograph was taken.

Photograph No. 1.—This photograph shows the pronounced œdema of both eyes, so marked

that he was quite unable to open them. Photophobia was present. The œdema was almost clear in twenty-four hours after the photograph was taken and completely clear in forty-eight hours.

Photographs No. 2 and 3.—These two photographs show the urticarial patches on the abdomen and back, varying in size and shape from small ones in the cervical region to the larger ones in the dorsal, scapular and abdominal regions. They were clear in twenty-four hours after the photographs were taken. In order to show up the patches in photographs 2 and 3. they were painted in on the skin in burnt cork.



No. 2.

Showing urticarial patches varying in size and shape from small ones in cervical region to larger ones in scapular and dorsal region. These patches had quite disappeared twenty-four hours after the photograph was taken.

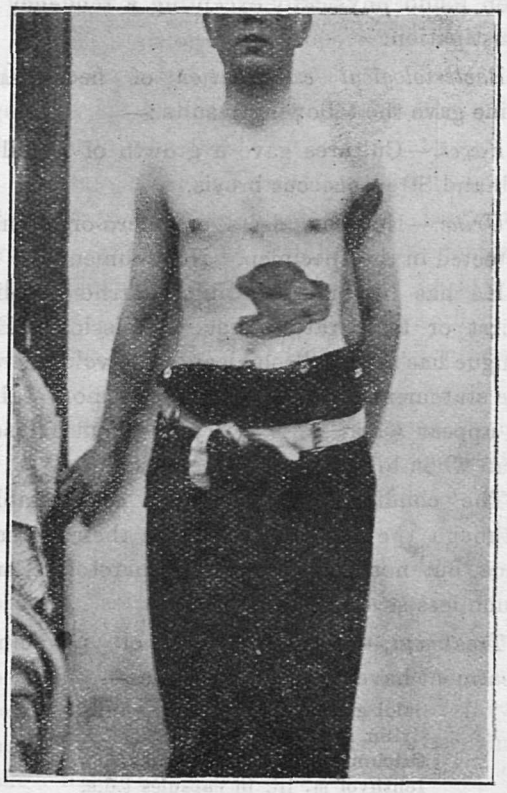
N.B.—The patches had to be painted in with burnt cork, in order to show them up in photographs.

Points of interest in the case:—

(1) The rash has now been more or less constantly appearing for three months.

(2) The large size, uniform redness, irregularity of outline and general distribution of the patches, and their involvement of all the layers of the skin.

(3) *Nocturnal development.*—This has been a prominent feature of the case.



No. 3.

Showing (1) large irregular-shaped urticarial patches on abdomen; (2) smaller patch on front of arm, running round into axilla and on to back of arm. Patches clear twenty-four hours after photograph. All photographs taken at same time.

(4) I think one is justified in saying that the cause of the rash in this case is probably intestinal in origin, together with a large neurotic element, as he has undoubtedly improved with intestinal antiseptics, aperients, and the anti-neurotic tonic.

(5) No other abnormalities have been discovered.

(6) Diet has had no influence over the appearance of the rash.

I have read several articles on angio-neurotic œdema, but have never been fortunate enough to have seen a case before, and have only seen one photograph of the condition, and that in Allbutt and Rolleston's System of Medicine (vol. ix., p. 231).

It seemed to me that the photographs would convey much more meaning of this somewhat rare disease than the reading of descriptions of the condition in standard books of Medicine, and other articles.

I am indebted to Miss Howarth, of this hospital, for kindly taking the excellent photographs, and to Dr. W. Harmon Morgan, also of this hospital, for permission to publish these short notes of his case.

R. Sells, M.R.C.S., L.R.C.P.,
Temp. Surgeon R.N.

Honours.

Wounded.

R.A.M.C.

Capt. W. C. D. Maile, R.A.M.C.
Capt. A. Morris, R.A.M.C. att. Royal Warwick Regt.

Military Cross.

Capt. C. H. Denyer, R.A.M.C. For conspicuous gallantry and devotion to duty when in command of divisional bearers. It was due to his fearless and capable handling of his party that the evacuation of the wounded was carried out with rapidity and success.

Foreign Decoration. (Belgian)

Ordre de l'Officier.

Lieut. Col. (Temp. Col.) H. P. W. Barrow, C.M.G., Deputy Assistant Director-General, A.M.S.

The following names have been mentioned for valuable medical services in connection with the War:—Bt. Col. E. M. Pilcher, Col. B. B. Connolly, C.B. ret. pay., Lt. Col. Sir F. S. Murphy, Temp. Lt. Col. A. H. Carter, Temp. Lt. Col. E Goodall, Lt. Col. A. R. Wilson, Lt. Col. G. A. Wright, Lt. Col. J. V. Savage. Temp. Major J. G. Taylor, Temp. Major G. T. S. Sichel, Capt. C. E. Petley, Temp. Capt. G. W. Goodhart, Temp. Capt. S. E. Denyer, Temp. Capt. A. A. Forty, Temp. Capt. L. H. Y. Stephen, Temp. Capt. F. W. S. Stone.

Gunshot Wounds of Joints: their Pathology and Treatment.

Hunterian Lecture delivered before the Royal College of Surgeons of England on March 2nd, 1917.

By FRANK COOK, B.Sc., M.B., B.S. Lond., F.R.C.S. Eng.,
Captain, R.A.M.C. (S.R.); Hunterian Professor, Royal College of Surgeons of England.

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(Continued from page 353.)

After-treatment.

Constant clinical supervision and—should doubt arise—frequent pathological observations are essential. The onset of septic arthritis or osteomyelitis is always possible and demands further treatment of early application. All cases exhibit a certain degree of pyrexia for the first day or two; this need give no cause for alarm. But a progressive pyrexia and rising pulse-rate, together with a continuation or increase in the local signs of inflammation, will determine a change of attitude, especially when doubt is confirmed by pathological investigation.

For the first few days all cases should be rigidly immobilised. Many French surgeons strongly advocate the use of plaster-of-Paris in the form of "appareils plâtrés à anse." In our hands it has not been generally successful in the early treatment of wounds, and so great an authority as Colonel Robert Jones advises that it should be discarded altogether.

When the object of treatment is mobility, and the asepticity of a case has been provisionally established—*i.e.*, after the temperature has been normal for about a week—light movements are applied. Further treatment in this direction is regulated by absence of reaction

and comparative freedom from pain. When the object is ankylosis, immobilisation for a longer period is obviously necessary; due regard should be paid to the position of election. The treatment of these cases by arthroplasty or resection may be considered at a later period. On the other hand, a flail limb may require fixation by securing ankylosis.

Where the progress of a wound is practically aseptic after operation the dressings should not be changed more than is strictly necessary. The exposure of a clean wound is always a risky proceeding under present conditions unless very special precautions are taken.

Post-operative transport should be delayed as long as the military situation allows.

Secondary Treatment.

This applies to the treatment of septic arthritis and osteo-myelitis; it is essentially a curative measure designed to deal with established infection, as opposed to primary treatment which is prophylactic in aim. As such, secondary procedures are required in those cases which have been ill-advisedly subjected to expectant treatment and in those where primary operation has failed to eliminate entirely the sources of infection. The available methods are :—

1. Strictly conservative measures, with the object of localising the inflammation.
2. Aspiration, which may be combined with irrigation or the injection of antiseptics.
3. Secondary arthrotomy, esquillectomy, synovectomy, and suture.
4. Drainage by tubes.
5. Arthrostomy, more or less extensive, combined with treatment by Carrel's method, salt packs, etc.
6. Secondary resection.
7. Secondary amputation.

The importance of pathological control in selecting the form of treatment is again emphasised; the issue at stake is now more immediately serious and vital.

It is not my intention to discuss the respective merits and details of those methods, as my experience of wounds at this stage has been limited. Suffice it to say, that the functional results are so unhappy as to accentuate the importance of primary treatment.

Amputation, the ultimate measure of defence, should not be too long withheld, especially in the lower limb where its consequences are less serious and the results of delay so frequently disastrous. Provided the general condition is good, however, pyrexia alone does not warrant amputation. The pulse affords a far more definite indication of decreasing resistance which may be further anticipated by pathological observations. *Cæteris paribus*, the longer the duration of the wound, the more radical should be the treatment, as the patient is less able to endure the prolonged convalescence demanded by the more conservative methods.

Individual Joints.

The Knee-joint.—Adequate primary treatment is of special importance in this joint, of which the complexity renders secondary treatment peculiarly difficult, and thorough drainage, irrigation, or aspiration practically impossible. The diaphragm formed by the ligamentum mucosum and the ligamenta alaria almost separates the joint into two cavities, each of which is again partially subdivided—the one by the cruciate ligaments and their synovial covering, the other by the upper border of the patella where it lies in contact with the femur. Apart from these divisions, there are the various ramifications and cul-de-sacs, such as the popliteus bursa and the post-condyloid synovial pouches.

The anatomical arrangement complicates *diagnosis* in certain cases. The suprapatellar pouch is of varying extent, although it usually extends

two inches above the patella; on rare occasions it fails to communicate with the main joint cavity. Hence it may be difficult to decide whether a foreign body or a fracture in the lower part of the thigh directly involves the main synovial sac. Other bursæ vary in the same way as regards their continuity with the joint. The bursa between the patellar ligament and the tubercle of the tibia is almost invariably separate. A missile may traverse the infrapatellar region or even penetrate to a considerable distance without perforating the synovial membrane. Similarly the joint may escape penetration by a fragment which remains lodged in the posterior cruciate ligament.

In these doubtful cases it is wise to assume in the first place that the foreign body or lesion is outside the joint lest the latter should be unnecessarily opened. Careful preliminary excision of the track of the wound is a safeguard against this possible danger.

Pus may escape from the suprapatellar pouch into the fascial planes of the thigh in septic arthritis; it frequently tracks along the popliteus bursa into the calf.

Immobilisation of the knee is effected by a Thomas's knee splint or one of its modifications. Slings made of perforated zinc add stability and greatly facilitate dressing without disturbance of the limb. Local splints may be applied in combination with the Thomas's to afford additional security. A foot-piece obviates rotatory movement and foot-drop. The whole limb is suspended when possible.

As in other joints, *exploratory arthrotomy* is conducted by an incision which affords a minimum degree of mutilation consistent with a free exposure of the intra-articular lesion. Operation by an insufficient incision can only lead to unnecessary traction and bruising of the synovial membrane. The position of the lesion may admit of treatment by excision and enlargement of the original wound. In many cases a simple form of arthrotomy will suffice, *e.g.*, a long vertical incision half an inch from the patella on the inner or the outer side; suprapatellar, lateral or posterior incisions. When a more extensive exposure of the interior of the joint is required, it may be necesary to perform a semilunar arthrotomy or a median arthrotomy by vertical section of the patella. The latter route would seem to afford less risk of exposure to fresh infection and a better functional prognosis than the semilunar method, in which the patellar ligament is transversely divided. Certain surgeons have advocated the routine employment of a semilunar incision in all cases, to provide for complete examination of the joint; but the risk is considerable, and, in the large majority of cases, unnecessary.

Serious comminution of the *patella* is treated by a primary excision of the bone, preferably subperiosteal; the joint is cleaned, and the synovial membrane sutured as far as possible. Minor fractures are treated by esquillectomy, the joint cleaned if penetrated, and the remaining fragments united by suture of the periosteum and ligaments, or by encircling the bone. In many cases the patellar lesion is merely an element of an extensive articular fracture; the whole bone is then removed in the course of a resection of the joint.

Primary resection of the knee is indicated in those cases in which the separated fragments of bone are so extensive as to render the future of the joint functionally hopeless. There is no object to be gained by conservative treatment unless the general condition of the patient is unfavourable for a severe operation. Fractures of this type afford a great potentiality of serious osteomyelitis, and it is therefore advisable to eliminate widely the sources of infection by resection and at the same time to hasten the inevitable ankylosis. Reference has already been made to the question of *amputation* of the lower limb. In both these forms of ope-

ration, measures should be taken to combat shock by nerve-blocking and by saline infusion, etc.

Much has been written about the *secondary treatment* of knee wounds. Some surgeons claim good results from simple drainage. Chutro has successfully applied Carrel's method. Others open the joint widely, turn back the patella, remove the semilunar cartilages, and divide the lateral and cruciate ligaments; a position of flexion is manitained until infection is subdued, and the joint is resected or merely extended at a later period. Chaput advocates drainage by patellectomy. Fullerton has had good results from resection with wide separation of the bones. Ballance advises resection with removal of the sharp posterior margin of the sawn condyles, in order that drainage of the intercondylar and postcondyloid pouches may be established. Yet another school resorts to early secondary amputation where more conservative measures, such as aspiration or simple arthrostomy, fail to establish drainage.

Other Joints.

The Elbow.—In the elbow it is practically impossible for the synovial membrane to be wounded without associated injury of bone. Wounds of this joint are less dangerous, however, than articular fractures of the knee; in the event of septic arthritis, it is possible effectively to establish drainage as a rule, and amputation—a catastrophe in the upper limb—is rarely necessary. At the same time, the local result is frequently unsatisfactory, and ankylosis or flail limb is only too common. Of the two, ankylosis in a good position is the more profitable. *It is therefore advisable to err on the conservative side in removing bone.* When a typical resection is definitely indicated, every attempt should be made to preserve the periosteum and capsule as far as possible. Arthrotomy, whether primary—to be followed by suture—or secondary, for purposes of drainage, may be effected by excision and enlargement of the original wound; by incisions on either side of the olecranon, preferably the outer; by division of the external lateral ligament; or by subperiosteal removal of the olecranon process.

Fixation in a flexed position is generally desirable. Early movement should be applied where the evolution is aseptic. Inevitable ankylosis is met by securing the joint at an angle of 100° or otherwise as the patient's occupation indicates.

The Shoulder.—Complete resection of the shoulder is also followed frequently by very considerable limitation of movement, especially when the function of the deltoid has been impaired by inflammation or by loss of tissue. Ankylosis is again preferable to a flail limb, and economical removal of bone fragments is better on the whole than typical resection unless the latter is definitely indicated by serious comminution in the early stages or urgent need for radical drainage later. Drainage operations should take into account the subscapular, bicipital, and infraspinate synovial protrusions. Posterior, and especially external, incisions endanger the circumflex nerve, although the former are frequently necessary. Occasionally a foreign body lodged in the head of the humerus may be removed through an osseous channel without opening the joint. A form of triangular humerus splint may be applied to the treatment of shoulder wounds. The position of election for ankylosis is abduction (50°), with slight flexion and internal rotation of the arm.

The Wrist.—The tendency of the carpal bones to necrose and the complexity of the synovial cavity and tendon sheaths in the neighbourhood of the wrist render the treatment of established infection difficult as in the knee-joint. Although the results are less dangerous, the restoration of function is at least as important

economically in the former. *Primary treatment is strongly indicated,* in spite of a natural tendency to neglect wounds of less vital importance during the early stages of evacuation. Unless the wound is comparatively innocuous and likely to respond to conservative treatment, a long dorsal incision is made between the tendon of the extensor longus pollicis and that of the extensor indicis, or on the inner side of the joints if more convenient. Osseous fragments are removed and fractured carpal bones enucleated. Complete resection may be required for satisfactory drainage at a later stage. Retention in a position of dorsiflexion is indicated in view of the possibility of ankylosis, but in favourable cases early movement should be practised.

The Hip.—Wounds of the hip-joint are frequently accompanied by lesions of more immediately vital importance, such as abdominal or seriously infected buttock wounds. On account of the comparative anatomical simplicity of the joint itself the ultimate establishment of satisfactory drainage, whether by arthrostomy or resection, is fairly certain. It is therefore advisable to withhold resection during the early stages of evacuation, as the operation is severe and the necessary post-operative fixation cannot be adequately applied during transport. Excision of the wound, posterior drainage or Carrel's treatment, represent the primary measures. Disarticulation is exceptional. Jones's abduction frame provides a satisfactory form of splint. A position of extension with slight abduction and outward rotation of the thigh is assumed in case of impending ankylosis.

The Ankle.—Astragalectomy is said to have afforded good results in wounds of the ankle that fail to respond to the more conservative measures. In severe wounds amputation should not be withheld; it guarantees a safe result and inflicts a comparatively inconsiderable disability in return.

In general, wounds of joints are classed with the more dreadful injuries of war; but in no other branch of military surgery may so great an individual and national benefit be derived from thoughtful treatment.

I am greatly indebted to Captain Lazarus-Barlow and Captain Adrian Stokes for pathological suggestions, to Captain S. Littlewood for notes on late treatment, and to Sergeant Shirley, R.A.M.C., for expert advice in radiography; also to the authors, chiefly French, of recent publications referring to this subject.

An Interesting Addition to the Wills Library.

An account of Sir Astley Cooper's case of Ligature of the Abdominal Aorta, July 5th, 1817.

Written by Edward Osler, a student of the United Hospitals, and presented to the Wills Library by his nephew, Sir William Osler, Bt., July 5th, 1917.

Vide Guy's Hospital Gazette, 8th July, 1917.

London,
July 5th, 1817.

My Dear James,—I sent you a few days since a scrap of paper on which was written a very bungling account of the great operation we had on Wednesday sennight. It was written in a very great hurry, and, I fear, was perfectly unintelligible. I will now give you the case.

——, aged about 40 in March, has a very large tumour on the upper and outer part of the left thigh. It projects considerably from immediately below the crural arch; it is very hard, immoveable, without any pulsation, and rather of a more livid colour than healthy parts. It is circumscribed, but gradually blended with the surrounding parts, and has an unequal, knobby feel. It began about twelve months ago, and has been gradually increasing. From the size, the situation, and no pulsation being felt at the femoral artery, no doubt was entertained that it was an aneurysm of the external iliac artery, very high up. Cooper thought of tying the common iliac, but I believe was afraid. I mentioned that I could indistinctly feel the descending branch of the external circumflex, and it is probable

I was correct, as one of the branches probably formed a large anastomosis with one of the vessels of the pelvis. Towards the end of May every part was very hard except one spot, which was soft and fluctuating, like an abscess. About the middle of June a line of ulceration began to appear, which extended, and at last formed an eschar as large as a crown piece. On the 24th June (Tuesday) Cooper saw him. After he had looked at him, he sat by his bedside for a few minutes buried in thought without speaking to anyone. At last he started up with a smile (you know his look).

"I'll do it, but I'll wait for hæmorrhage." He had not long to wait. On Wednesday afternoon the patient lost eighteen ounces of blood, and Cooper was sent for. He had taken a subject in the deadhouse and operated on it through the abdomen and from the side (for the iliac). The first he found easy, the other utterly impracticable.

The patient was brought to the theatre, and Cooper made an incision immediately above Poupart's ligament just large enough to introduce his finger, that it might plug the wound. His object was to find the mouth of the artery and thus command the hæmorrhage, and then cut down on it and secure it. He found, however, that the artery was ulcerated higher than he could reach, and that the common iliac itself was affected. He therefore had a plug to fit the wound, which he introduced on withdrawing his finger. He now determined to put a ligature on the aorta. He made a longitudinal incision about 2½ inches long on the left side of the umbilicus, about an inch from the linea alba, cutting through the rectus. He introduced his finger and pushed the intestines away, felt for the aorta, tore through the mesocolon, with his finger separated the artery, and looking round said, "Gentlemen, I have the pleasure of informing you that the aorta is now hooked up on my finger." An aneurismal needle was now carried down under the vessel, and it was tied with facility. The operation, indeed, was by no means difficult or tedious. The ligature was left hanging out at the wound, which was united by the quilled suture.

A dose of Tra. Opii was administered and he had a good night. On Thursday he was very cheerful and sanguine in his hopes of recovery. Both limbs were nearly of the natural temperature. He had no affection of the head or pain in the abdomen. Even Mr. Cooper and Mr. Travers had very great hopes of him, as the circulation was evidently effected in the inferior extremities, his pulse about 110, of natural strength, and no throbbing of the carotids.

When I went to see him on Friday morning, after writing you, a great change had taken place. His pulse was above 120 and weak, not at all thready, but about the natural fullness, but very short and feeble, as if the artery were not half full of blood. His face was pale and contracted, his eyes dull and heavy, and he seldom opened them; his left leg was cold, as were his extremities. He had passed a restless night, and slept very little. At one o'clock he died. At four we examined his body. Brookes was present. The left inferior extremity was in a state of gangrene, not, however, to any great extent; vesications had taken place, but there was little fœtor from that. The other leg was emphysematous and the penis and scrotum were enormously swelled, which, however, had taken . . .

Reviews, etc.

Infected Wounds. By A. Carrel and G. Dehelly. Translated by Herbert Child, Capt. R.A.M.C. Published by Messrs. Baillière, Tindall & Cox, London. Price 5s. net.

In this book Carrel and Dehelly give a clear and detailed account of the methods of wound treatment usually known as Carrel's tubes. The whole technique including the preparation of the Dakin's fluid and the bacteriological control is fully dealt with. The method has now been tried in many thousands of infected wounds, and it is claimed that where the technique is strictly followed out the results are remarkably good. We have no hesitation in recommending any medical man to read this short but comprehensive and practical work before attempting to carry out treatment by Carrel's methods.

Notice.

Guy's Hospital Medical School.

The following Entrance Scholarships have been awarded:—

Senior Science Scholarships for Universlty Students.—Richard Gainsborough, Magdalen College, Oxford, £75.

Junior Science Scholarship.—Alfred Talbot Rogers, Preliminary Science Class, Guy's Hospital, £120.

Scholarships in Arts.—George Russell Morgan Apsey, the King's School, Canterbury, £50. Charles Hugh Christie Toussaint, St. Bees School, £50.

2nd October, 1917.

Marriage.

HILTON JONES—DAVIES BRYAN.—On the 25th Sept., at Engedi. C. M. Chapel, Carnarvon, by the Rev. R. D. Rowlands (Anthropos), and the Rev. John Owen, M.A., Captain R. Orthin Hilton Jones, M.C., R.A.M.C., youngest son of Dr. R. T. Jones, J.P., and Mrs. Jones, Harlich, to Olwen, only child of Mr. and Mrs. Edward Davies Bryan, of Cairo, Egypt, and Carnarvon.

Death.

FOLEY.—On October 1st, 1917, at her sister's house, Perham Road, West Kensington, Mary Foley, of Guy's Hospital Trained Nurses' Institution.

J. J. C.

GUY'S HOSPITAL GAZETTE.

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Passim.

The Economics of Medical Education.

IN our last issue a correspondent suggested the establishment of National Scholarships for Medical Students, in view of the fact that in the hard times that are bound to come after the war there will be a deficiency of men who have sufficient time or money to study medicine. We ventured to express the opinion that such a course is not likely to be undertaken by the Government. Our correspondent in a letter which we publish elsewhere maintains that our fears are unjustified by the facts, and he points out logically enough that there are no more theoretical objections to his plan of national scholarships than to the present system of Board of Education grants for medical schools. Needless to say we quite agree and would be only too glad to see his plan adopted. We fear, however, that Governments are swayed not so much by reason as by the party cries of demagogues and newspaper proprietors. Board of Education grants are taken as a matter of course and are not likely to form a subject on which the editors of our most influential periodicals such as *John Bull* will take action. With scholarships, however, it may be quite otherwise. Here we have actual money paid out of public funds to definite persons to assist them in their education. Such a step gives a fine opening to the unscrupulous. Their arguments would be something of this kind: Only rich men can become doctors; are the poor to pay through their rates and taxes for the education of men who will afterwards charge them for their services? Doctors are paid for their work, let them pay for their own education.

Great changes are, of course, taking place at the Board of Education. For the first time a man who is not primarily a politician has been appointed to take charge of that department. Mr. Fisher must realise as well as anyone else that a supply of medical men is necessary for the community both in peace and war, and we have no doubt that if he is still in his present position after the war he will be prepared to take steps to enable the personel of the medical profession to be kept up to strength. We can only point out that as it takes from five to six years to produce a qualified medical man, there will be no time for delay. At present there is a steady wastage in the medical profession owing to the war and almost a complete cessation of entries in medical schools, at any rate, as far as British subjects are concerned. If the war goes on much longer, and Lord Northcliffe has recently told us that it has only just begun, the country

will find that there is a serious shortage of medical men.

A more practical point, however, is the question whether scholarships for the sons of Guy's men, or other medical men, who have fallen in the war might not be established at Guy's as a fitting form of war memorial. From the point of view of raising money, there is no time like the present. Without suggesting that any of those interested in the Hospital are profiteers it cannot be denied that most people are likely to be worse off from a financial point of view in the years that follow the war than at present.

Then, again, there are many Guy's men on active service who may well lose their lives before the end of the war. Some of these, we believe, would be glad to leave bequests to a Guy's War Memorial Scholarship Fund. Parents, also, who have lost their sons might also be willing to contribute to such a fund. Let the Treasurer and Governors of the Hospital give old Guy's men and others an opportunity of showing their gratitude to their colleagues who have fallen by opening a War Memorial Fund which will have as its objective not some monument of bronze or stone, but a far more lasting memorial—the education of the sons of those who have given up their lives for their country.

We hear with great regret of the death of another Guy's man in France, Capt. N. H. Saw. His death comes as a reminder to us that though the R.A.M.C. is a non-combatant corps, it is, in fact, very far from being free from danger. The casualty list of R.A.M.C. men has averaged about 25 a week for some months past and practically all these casualties have occurred in France. In many ways a regimental M.O. runs greater risks even than an infantry combatant officer. When a battalion goes into an attack it is rare for more than about half the officers to go over the top, while the remainder stay at some reinforcement depôt well behind the lines. The medical officer, however, has no one to take his place, and must play an active part in every attack. Even when the actual fighting is over, the M.O. not infrequently goes out at considerable personal risk to bring in wounded.

An attempt is being made again this year to collect enough Rugby football enthusiasts to form a regular XV. Anyone who is willing to play should give his name as soon as possible to Mr. C. L. Curle. We hope that he may succeed in making this season's football as successful as that of last year.

We regret to hear that Lieut.Col. Fagge has been invalided home. He is at present in hospital in London. All Guy's men will join us in wishing him a speedy recovery.

Honours.

Wounded.

Capt. A. C. Ransford, R.A.M.C. (T.F.)
Capt. C. P. Symonds, R.A.M.C. (temporary).
Lieut. F. H. Fuller, R.A.M.C.

D S.O.

Temp. Capt. H. A. Pallant, M.C., R.A.M.C.

M.C.

Capt. H. M. Goldstein, New Zealand M.C.
Capt. J. Stephenson (Spec. Res.).
Lieut. J. A. Evans, R F.A.
Temp. Lieut. R. S. Kennedy, R..A.M.C.

Foreign Decorations.

Croix de Guerre (French).
Temp. Capt. A. L. George, R.A.M.C.

Order of St. Sava, 4th Class (Serbian).
Temp. Capt. A. A. Greenwood, R.A.M.C.

Obituary.

Captain HAROLD ACKROYD, V.C., M.C., M.D.

Captain Harold Ackroyd, V.C., M.C., M.D., late R.A.M.C. (attached R. Berks Regt.), was the son of Mr. Edward Ackroyd, for many years chairman of the Southport and Cheshire Lines Extension Railway Company. He received his education at Mr. Clough's School, Mintholme College, Park Crescent, Southport, and then proceeded to Shrewsbury, and Gonville and Caius College, Cambridge, where he took his B.A. in 1899, and subsequently proceeded to his M.A., B.Ch., M.D., and other medical degrees. He was never in private practice. For some time he was at Guy's Hospital, London, and later was the House-Surgeon at Queen's Hospital, Birmingham. Then for a period he was at the David Lewis Northern Hospital, Liverpool. After this he secured a British Medical Association Scholarship, and for some years was engaged in research work at Cambridge. In February, 1915, he was commissioned as a temporary lieutenant in the R.A.M.C., being afterwards promoted captain. He went to France in August, 1915, and was invalided home in August, 1916, and went out again about November. In the meantime he received the notification that he had been awarded the Military Cross for conspicuous bravery as a battalion doctor. He was slightly wounded on 31st July, but, remaining on duty, was killed in action on 11th August, 1917. Captain Ackroyd was married in 1908, and up to that time he resided in Southport, since when he has resided at Royston, in Hertfordshire.

After his death Capt. Ackroyd was awarded the V.C., and at a recent investiture at Buckingham Palace his widow and small son received both it and the Military Cross. The London "Gazette" describes the actions for which he was granted the V.C. as follows:—

"Utterly regardless of danger he worked continuously for many hours up and down and in front of the line tending the wounded and saving the lives of officers and men. In so doing he had to move across the open under heavy machine gun, rifle, and shell fire. He carried a wounded officer to a place of safety under very heavy fire. On another occasion he went some way in front of our advanced line and brought in a wounded man under continuous sniping and machine gun fire. His heroism was the means of saving many lives, and provided a magnificent example of courage, cheerfulness, and determination to the fighting men in whose midst he was carrying out his splendid work. This gallant officer has since been killed in action."

Notes on Colitis.

By J. H. RYFFEL.

Microscopic examinations are of great importance in the study of conditions which may be grouped under the name colitis. Fortunately all that is required in the first instance is fresh material, isotonic salt solution and a solution of iodine. If the fæcal material is sufficiently fluid it may be placed on the slide and examined direct; if too dense, it is mixed with isotonic salt solution. Iodine acting as a protoplasmic stain serves to show up the cells present. One or two drops of 1 per cent. iodine in potassium iodide solution, or decinormal iodine, are added to the diluted material on the slide, or a separate portion may be mixed with a more dilute iodine solution.

Both pus cells and red cells disintegrate rapidly in fæcal material, so that they are frequently unrecognisable after twenty-four hours.

This is probably the origin of the current statement that ulcerative colitis is characterised by the presence of mucus as well as blood in the fæces. Macroscopically the material has the appearance of mucus, but, when fresh, it is sufficiently rich in pus cells to merit the name pus, or, at any rate, muco-pus. In contrast to this in muco-membranous colitis, though cells are present in the material of which the membranes are formed, there is nothing to suggest the presence of pus, while in mucous colitis the material is practically structureless. This distinction is of practical importance. The mucous membrane of the rectum contains glands which secrete mucus and this naturally accumulates on the surface of scybala if they are retained long enough, and the excretion of excessive mucus with solid motions, which is characteristic of so-called mucous colitis, is apparently only an exaggeration of this normal event, to be treated in the same way by the use of laxatives. On the other hand, though red cells may be present from a variety of causes, with pus cells widely distributed in the material we are certainly dealing with a case in which there is ulceration.

In a typical fatal case of simple ulcerative colitis, with the possible exception of secondary sepsis elsewhere, the disease is confined to the cæcum and large intestine, the whole inner surface of which is largely denuded of mucous membrane, the bare muscle wall being lined with granulation tissue. Prominent hyperæmic islands of mucous membrane remain, and there are patches where regeneration of a less prominent mucous membrane is taking place. During life the fæcal material corresponds with this condition. It is fluid, somewhat viscid from the presence partly of disintegrated pus partly of mucus, and contains large numbers of red cells and pus cells and a certain number of round vacuolated cells larger than the pus cells, which are presumably epithelial cells.

Ulcerative colitis requires to be distinguished from a number of other conditions in which somewhat similar products may be obtained.

In bacillary dysentery the product is essentially similar. Diagnosis is bacteriological.

Amœbic dysentery is characterised by the presence of blood and mucus, not pus cells, and by the presence of amœbæ. The latter must be sought in material which is not more than three hours old, as they die and disintegrate rapidly after evacuation. Amœboid movements, which will serve to distinguish absolutely from epithelial cells, can be seen on mounting some of the blood-stained mucus in saline, provided the slide is not too cold. A warm stage, though desirable, is not necessary.

In carcinoma of the colon or rectum some associated colitis is by no means unusual, but, as passage of material through the gut is not so rapid, there is more time for disintegration, so that pus cells and red cells largely disappear as such. The same applies to ulceration, say tuberculous ulceration, of the small intestine. Isolated masses of pus may survive passage through the large intestine, but the cells are in general disintegrated.

Secondary colitis may present difficulty until the prime cause is discovered.

Essentially a septic condition with formation of exudate containing pus, ulcerative colitis requires treatment as far as possible along the lines that are recognised as being efficient in the treatment of sepsis. Antiseptics have yet to be found which have demonstrably less lethal effect on phagocytic cells than on bacteria, and their use in sepsis seems to be rather to prevent bacterial activity in exudate already formed than to influence bacterial growth in actual contact with the tissues. Further, all

known antiseptics are far less efficient in the presence of exudate than in clean solutions, so that, while in mild cases antiseptics taken by the mouth, such as cyllin or kerol, may be of some use, in severe cases, with copious motions containing much exudate their chance of utility seems extremely small.

As with other manifestaions of sepsis the most important measure is the provision of efficient drainage. This is supplied, to a certain extent, by the natural response of frequent evacuation of fluid motions, so that on first principles the use of morphine or opium and of astringents is not desirable unless they are necessary because of excessive pain or excessive hæmorrhage. To assist drainage, wash-outs, which should be hypertonic rather than hypotonic, are employed, being applied either per rectum or more efficiently through the appendix after appendicostomy.

Now drainage of the intestine presents a special problem in that the exudate formed above has to pass through the rest of the tube before it is evacuated. Hence it is extremely desirable to regulate bacterial activity in the exudate, a function which may be served though irregularly by antiseptics added to the fluid used for irrigation. Recently vegetable charcoal given by the mouth has been introduced at this hospital by Dr. Hurst. Its utility seems to lie in its influence on the exudate. The salient property of charcoal is its power of absorbing other substances. This may act in one of two ways: either the charcoal, which is to start with charged with oxygen, succeeds in carrying some of its oxygen as far as the colon, and so inhibits anaerobes, or absorption of products takes place from the exudate into the charcoal, which in being discharged thus assists drainage and tends to keep the exudate clean. The latter seems the more feasible explanation. Certainly charcoal has no astringent effect, the evacuations remaining as fluid and copious as before, until there is improvement, shown by the condition of the patient and by the number of pus cells and red cells in the fæces.

The charcoal, which should be finely divided, *i.e.*, of the brand called "subtil," is conveniently mixed with an equal quantity of brandy and a little water and taken with meals. The dosage must be such that each motion is black with charcoal; 9 drm. daily will often suffice, but as much as 16 drm. a day has been used.

An analysis of recent cases in the Medical Wards may be of interest. In all there were 11 typical cases, 4 men and 7 women, of ages ranging from 19 to 49 years, all but three being in the neighbourhood of 30 years.

Three cases, two men and one woman, aged respectively 26, 33, and 29 years, had but the single attack and were discharged cured. The effect of charcoal was most marked in the first case, as before this treatment was started he had been in hospital for 19 days, continually going down hill and losing weight. When charcoal was given there was immediate improvement, and he was discharged cured 50 days later. His further history is, unfortunately, not known. The second case suffered from constipation before the attack, and this has been more marked since recovery, but he has had no recurrence of colitis for over a year. The third case was unusual in having marked diacetic acid and indican in her urine during the acute stage. She has been well for nearly a year.

In four cases, 1 man and 3 women, charcoal was of no real benefit. These cases were all ultimately fatal. In one, a girl of nineteen years, there was with charcoal an apparent improvement in the fæces, but pyrexia did not diminish and she became very anæmic. Other methods were tried unsuccessfully.

Three of the cases, 1 man and 2 women, had had previous attacks. They greatly improved under charcoal, but cannot be described as cured, the fæces still giving chemical tests for blood, though no red cells were to be seen

The remaining case, a woman, aged 30 years, is a recurrent case. She improved somewhat under charcoal, but relapsed. Appendicostomy was then performed. She improved, then relapsed, but was finally discharged with motions only once a day still containing blood by chemical tests. Since then she has again had an acute relapse. This case is unusual in this series in that the motions during each acute attack have been found by Dr. Eyre to be rich in streptococcus longus.

Two cases may be added in which ulcerative colitis with characteristic motions appeared suddenly, in one after pneumonia, in the other during treatment for empyema. Both cases responded well to the use of charcoal.

There is only the one case in the series where the relative efficiency of charcoal and of irrigation through an appendicostomy can be compared. Probably appendicostomy, if successfully performed, affords an opportunity for more efficient treatment, but there are many objections to appendicostomy which do not apply to the use of charcoal.

The cases above all gave typical loose motions rich in red cells and pus cells, but there are other milder cases of ulcerative colitis, in which solid motions are passed with a limited amount of blood and pus, or only blood and mucus. These are chronic cases with slight exacerbations. Charcoal is not in these particularly efficient. On first principles the first step in treatment would be to produce loose motions by the use of laxatives such as liquid paraffin or salts, but well-defined results must be difficult to obtain.

Two Cases of Cystinuria.

Cystin is a sulphur-containing substance formed in the breaking down of proteins within the body. In certain people, owing to some derangement of sulphur metabolism, cystin is excreted in the urine. This derangement is looked upon as an inborn error of metabolism in the same way as the other known errors of metabolism—alkaptonuria, albinism, and pentosuria, are regarded. These are all conditions of considerable rarity, cystinuria being probably the least rare.

The condition of cystinuria has a tendency to occur in several members of the same family, it affects males far more frequently than females; the effect of heredity is well marked, consanguinity of parentage is said to have some influence. It is most probably a congenital abnormality, and there is some reason to believe that, like alkaptonuria, it is occasionally temporary or intermittent.

The disturbance of sulphur metabolism in cystinuria is in no sense complete, and only a portion of the total cystin of the proteins broken down is excreted as such. Cystinurics always excrete sulphates and neutral sulphur other than that contained in the cystin. But cystin is by no means the only protein fraction which is implicated, and in some cases other amino-acids or their derivatives are found in the urine. The commonest are the diamines cadaverin and putrescin sometimes found in the fæces and in the urine of cystinurics, and, more rarely, leucin and tyrosin are excreted in the urine.

The question whether the excretion of cystin is influenced by the amount of protein in the diet is still undecided. The excretion of cystin is undoubtedly partly endogenous, but there is some evidence to show that the output can be largely reduced by keeping the patient on a diet almost protein free.

Cystin crystallises in flat, colourless, hexagonal plates, the edges of which show paired inequalities of length, the hexagons being often superimposed upon one another. They are freely soluble in ammonia and mineral acids, thus differing from uric acid. There is a tendency for cystinuries to form calculi, sometimes in great quantities. The cystin calculi are very characteristic in appearance; they are fawn-coloured and rather soft and greasy to feel.

Case I.

Herbert, W. L., clerk, æt. 26, was first admitted into Luke under Sir Alfred Fripp in October, 1916, giving the following history:—

In 1907 (at the age of 17 years) he one day had a feeling of general malaise with gradually increasing discomfort in the region of the right costal margin at the back. This increased until, in the evening, the pain was very severe. He went to bed and the pain continued throughout the night, after which it gradually abated and left him with a dull but rather severe aching sensation in the right lumbar region. After three or four weeks he began to get about again, but a few days later the pain returned and he was again confined to bed for about the same length of time. Three days after returning to work he experienced a sickening sensation, as though something were in the bladder. Later that day he managed to pass a calculus into the penile portion of the urethra. It lodged about an inch from the meatus, and his doctor finally delivered for him a stone about the size and shape of a haricot bean, dark yellow and waxy-looking.

His doctor found albumen in the urine when first called in, and until the passing of the calculus patient was supposed to be suffering from "congestion of the kidneys." The calculus was described as a uric acid stone, and patient given carbonates to take. Albumen was present in the urine for some time after the passing of the stone.

After this illness there was a period of five years during which the patient at irregular intervals felt unwell and experienced some discomfort in the lumbar region. He cannot remember on which side this occurred, but it would continue for some hours, perhaps a whole day, at the end of which time he would pass one or more very small stones or grains of sandy-looking material.

In 1912, however, he had an attack quite similar to his first in 1907. The pain was of greater severity, and with the accompanying malaise forced him to remain in bed for about three weeks. Finally he passed a stone similar to that passed five years before.

Again, in 1913, he had an attack severe enough to confine him to bed, this time for only ten days. For the first time he is able to assert definitely that the pain was on the left side.

The next attack was in 1914; this lasted a still shorter time, and the calculus was passed within three days. In September, 1915, another attack occurred and within twenty-four hours he had passed two stones about the size and shape of haricot beans and several smaller ones. He describes a very definite course taken by the pain. It travelled gradually from under the lower ribs at the back across the abdomen to the suprapubic region.

The next attack was in May, 1916, a calculus being passed after about twelve hours. He came up to Guy's in October of that year because he was experiencing a feeling of discomfort in the region of the right kidney and X-ray photographs had shown the presence of a calculus.

Sir Alfred Fripp operated, and, delivering the right kidney through a lumbar wound very easily, removed from the pelvis a large stone,

roughly pyramidal in shape, measuring one by one and three-quarter inches. The incision in the renal pelvis was accurately sutured with fine catgut. While in hospital, and still in bed after the operation, patient had another attack on the left side simliar to the previous ones. After twelve hours of severe pain he began passing small calculi and grains. About a week later he passed a stone the size of a small haricot bean. He made an uninterrupted recovery and left the hospital with a sound scar four weeks after the operation.

Three days after resuming work he felt pain in the same way as in the previous attacks on the right side. There was extreme tenderness, and he took to bed. Three or four weeks later a swelling appeared at the site of the operation scar. This was diagnosed at the local hospital as a hernia, but about a week later it was tapped and one and a half pints of urine drawn off. A drainage tube was inserted, and a urinary fistula formed.

At the end of January, 1917, he was re-admitted to Luke on account of the obstruction of the right ureter, and was examined by Mr. Thompson, who found the passage of a ureteric catheter blocked on the right side about two and a half inches above the bladder. Sir Alfred operated a second time and removed this ureteric calculus. An incision was made in the right iliac region, such as for ligature of the common iliac, the peritoneum reflected inwards and the calculus come down upon easily just below the brim of the pelvis. Two guide sutures were inserted, the ureter incised between them, the calculus expressed, and the incision in the ureter accurately sutured with fine catgut. The calculus had the usual yellow, waxy appearance so characteristic of cystin, and was the size of a small bean. Cystin crystals were found in very small quantities in the urine after the operation. No records are obtainable as to the quantity of cystin crystals excreted previous to this time.

It was anticipated that after removal of the obstructing calculus the renal fistula would gradually close and this it did two days after the operation. But ten days later it re-opened, and after an interval of a few days closed again, to re-open a second time ten days later; so a skiagraph was taken to see if any further stone was present. Just below the tip of the transverse process of the third lumbar vertebra an opacity highly suggestive of a ureteric calculus situated about the first narrow portion of the ureter was demonstrated. The patient continued to pass part of his urine from the right lumbar fistula and was advised to take a month's holiday, after which to return for the consideration of further operative measures.

In April he was re-admitted, the fistula having closed three days previously. An X-ray examination showed the small opacity seen upon the previous occasion, and also a large opacity at the lower end of the ureter. A week or two later he passed a calculus of the usual appearance roughly triangular in shape. The fistula has not since re-opened. It may be noted that in this case there is no consanguinity of parentage, and no history of renal calculi can be obtained from any other member of the family.

I am indebted to Sir Alfred Fripp for his permission to publish these details and especially for his kindness in looking through and correcting the rough notes of the case.

Case II.

Tom, W. B., clerk, æt. 17, was admitted into Lazarus in February, 1916, for urinary fistula. He gave the following history of renal trouble:

In 1907, at the age of 8 years, he was admitted into the Children's Hospital, Great Ormond Street, for great pain before and during micturition, and Mr. Steward removed a calculus from the bladder. Later in the same year he

was re-admitted for pain in the left loin and Mr. Steward removed two stones from the left kidney. He was free from symptoms of urinary trouble until August, 1915, when he noticed that his urine was of a dark brown colour and he felt an aching in the left lumbar region. In the first week of September of that year he was admitted under Sir Arbuthnot Lane for increase in severity of the lumbar pain and hæmaturia. A lump was then palpable in the left lumbar region, which was very tender. Mr. J. Saner operated and opened a large abscess from which came great quantities of pus and urine. It was drained and the fistula closed after three weeks. A month later Mr. Eccles reported that by the X-rays he could see no abnormality on the right side, but several opaque masses were to be seen in the region of the left kidney.

The patient was discharged and continued well until in the first week of February, 1916, the urinary fistula at the upper end of the 1915 incision re-opened. He was re-admitted to Lazarus and Mr. Shenton reported that the X-rays showed at least four calculi in the left kidney. There was no blood,but plenty of pus in the urine. Mr. Fagge operated. Almost as soon as the knife had passed through the skin it penetrated the substance of the kidney and a quantity of brownish muddy fluid escaped. One large stone and two smaller ones were got out, but such large quantities of fluid escaped during their extraction that Mr. Fagge decided it was useless to try to preserve a kidney which was evidently in such an advanced condition of hydronephrosis. The removal of the kidney was attended with considerable difficulty, as it was very adherent to the surrounding structures. When removed it was found to be simply a mass of thin-walled lobules which had been distended with fluid and many of which contained small, soft stones.

The patient made a rapid recovery and five days after the operation microscopical examination for the purpose of discovering the amount of pyuria still present, showed only a trace of pus, but the presence in very large quantities of crystals which Dr. Laidlaw identified as cystin.

Examination by Dr. Ryffel of one of the calculi extracted by Mr. Fagge showed that it consisted entirely of phosphates and contained no trace of cystin. Dr. Ryffel suggested the probability that the stones extracted by Mr. Steward nine years before had, however, been composed of cystin or had a cystin nucleus.

The patient was discharged six weeks after admission with the wound healed. He was still passing cystin. Subsequent investigation disclosed the fact that his parents and brother were free from the abnormality, but that his sister was also a cystinuric. Specimens obtained from the patient and his sister a year after the operation showed that in both cases the urine contained still a large quantity of cystin crystals. It should be noted the the presence of cystinuria had caused no symptoms whatever in the case of the sister and the condition would not have been discovered if it had not been specially looked for. There was no consanguinity of parentage in this case.

I wish to express my thanks to Mr. Fagge for his permission to publish this case and to Dr. Laidlaw and Dr. Ryffel for their advice used in the preparation of these notes.

A. Ll. S. P.

Publishers' Announcements.

The sixth edition, revised and enlarged, of "Tropical Diseases," by Sir Patrick Manson, G.C.M.G., M.D., F.R.S., is announced for immediate publication by the house of Cassell. In view of the rapid advances that are being made in the study and treatment of tropical diseases, the author has subjected the book to a thorough revision. The chapter on Mosquitoes and the sections on Tse-tse Flies and Ticks have been brought up to date by Lieut.-Col. Alcock, C.I.E., F.R.S., of the London School of Tropical Medicine.

A Note on the Early Treatment of Gunshot Wounds of the Chest.

The primary operative measures advocated and practised by Duval, of the French medical service, and Colonel Gray, Captain J. Anderson, and other surgeons of our own army, appreciably reduce the mortality of severe chest wounds.

A year ago *open* wounds of the chest implied practically certain death, whether from mechanical disadvantage to respiration and circulation or from subsequent sepsis, even though hæmorrhage and shock had been survived during the first few hours. It has since been found that excision of the wound and closure of the chest wall at the earliest favourable opportunity, under local anæsthesia, lead to the recovery of a definite number of otherwise fatal cases. Mechanical improvement is immediate, and the dangers of sepsis are materially modified.

Severe tangential wounds of the chest, in which there is considerable damage to the ribs and pleura, and possibly to the underlying lung, without direct communication between the pleural cavity and the exterior, also demand thorough primary excision and suture. The post-operative results of these latter cases are excellent, as their general condition in the early stages is comparatively good. They are particularly liable to succumb to severe sepsis if the primary operation is neglected.

Whenever possible, the patient is subjected to X-ray examination, and foreign bodies are localised. Before operation he is well doped with omnopon and scopolamine to obviate mental anxiety. Anæsthesia is induced by injection of novocaine and adrenalin solutions around the intercostal nerves of the area involved. Occasionally light general anæsthesia is needed in addition. Oxygen is administered with advantage throughout the operation.

The damaged tissues of the chest wall are thoroughly excised, including fractured rib fragments and the soiled edges of the pleural wound. If necessary, the scapula is divided to facilitate a complete exposure of the wound. The pleural cavity is emptied of blood and foreign bodies. These are also removed from the lung when present and if accessible. The lung affected can usually be drawn into the field of operation without difficulty; more rib is resected when necessary for satisfactory treatment of the pulmonary wound. Vessels are ligatured if bleeding is observed. The visceral pleura and underlying lung tissue are then completely sutured. It is of great importance to suture any hole in the diaphragm after returning abdominal viscera or omentum if prolapsed.

The pleural cavity having been cleaned as far as possible by emptying out the blood and swabbing, flavine solution may be introduced as a prophylactic aid. The edges of the parietal pleura can rarely be drawn together in a wound of considerable size; although this is not essential, the hole must be completely closed by uniting the overlying muscle of the chest wall. The skin edges are apposed by widely interrupted sutures.

B.I.P.P. may with advantage be applied to the wound edges, including those of the lung, before suture. The lung itself is capable of dealing with infective material to a very marked degree; even when it is impossible to recover a foreign body from its substance, the visceral pleura and underlying tissue are sutured to prevent infection tracking to the less resistant pleural cavity.

After closure of the chest wall, aspiration has been suggested as a means of expanding the lung and obliterating the pleural cavity. This would seem to afford too great a risk of

pulmonary hæmorrhage, as the operation is usually performed within a few hours of infliction of the wound. One has lately run a stream of oxygen into the cavity before closing the chest; theoretically, at any rate, this is absorbed more rapidly than air, and, in a favourable case, expansion of the lung is thus accelerated.

In *closed* chest wounds generally the prognosis is so good as to render unjustifiable the risk of an extensive primary operation. Obviously dirty entrance or exit wounds are excised, and any hole in the pleura that may be revealed in this way is sutured. Otherwise the case is treated expectantly.

Aspiration may be indicated later by the mechanical embarrassment of a large hæmothorax or by signs of infection. There is practically no risk of further hæmorrhage as a result of aspiration after the third day, and very little after forty-eight hours. Oxygen replacement is of considerable value, though not essential; it may lessen the risk of hæmorrhage when very early aspiration is demanded. The blood withdrawn should invariably be subjected to bacteriological examination.

Should the clinical signs of pleural infection persist after aspiration, or should the fluid withdrawn exhibit bacterial growth of any virulence, drainage by resection must not be delayed.

With drainage, Carrel's treatment or irrigation may be combined. In order that the Carrel's tubes may remain in position in different parts of the cavity, they are supported by fine wire stylets.

After primary operation, open chest wounds are treated on the same lines as the closed wounds which they then resemble. Pneumonia of the opposite lung is a fairly frequent and very serious complication. A combination of chest and abdominal wounds is by no means hopeless.

F. C.

A Case of Hæmatemesis due to Aneurysm of the Descending Thoracic Aorta.

H. G., aged 39, an L.C.C. foreman, was admitted into John Ward on the 28th of August. There was no history of any previous illness. Three weeks before his admission the patient had experienced shooting pains in the lower part of his back, and two days previously griping pains in the epigastrium just below the xiphisternum. The pains in the epigastrium had come on during meals and had lasted for about two hours.

On the 28th August, soon after dinner, while drinking a glass of beer, he suddenly felt a lump in his throat, and immediately vomited a pint of dark blood. He was brought up to the Front Surgery. On examination he had pain and tenderness in the epigastrium with slight rigidity. His pulse was fast, but not feeble. He was distinctly anæmic and his mucous membrane blanched. He was admitted at 5 p.m. with the diagnosis of hæmatemesis from a gastric ulcer. After admission the patient was fairly comfortable till 9 p.m., when he vomited a couple of pints of dark blood, a part of which was clotted. He received an injection of morphia gr. $\frac{1}{4}$, but became restless and sweaty, with a pulse of 144.

At 9.30 he vomited another cupful of blood, and passed some per rectum; he complained of intolerable pain in his back. A further 1/6 gr. of morphia was injected and an ice compress applied to his abdomen. At 12 p.m. his pulse had come down to 112. At 4.30 a.m. he vomited more blood, and morphia was given again. At 10.30 a.m. the patient expired. On the same day an autopsy was done.

An aneurysm about the size of a hen's egg was found in the descending thoracic aorta. On

opening up the aorta, a perforating ulcer of the size of a threepenny bit was found communicating with the œsophagus. On the opposite wall of the œsophagus was another contact ulcer of the same size. The aneurysm had also eroded the right hand side of the body of the seventh dorsal vertebra to a slight extent, which probably accounted for the pain in the back. The stomach and intestines were full of altered blood.

Until the autopsy the patient was regarded by everyone who saw him as a particularly severe case of hæmorrhage from a gastric ulcer. Had it not been possible to make a post-mortem examination, his death would have been considered to be one of those rare cases in which hæmatemesis from gastric ulcer has caused death. Experience in recent years has shown quite clearly that cases of bleeding gastric ulcer if treated with morphia and rectal dextrose have an extremely low rate of mortality, which is far below that of cases operated on in the acute stage. The present case shows that possibly some of the patients reported as having died of gastric hæmorrhage may, if the diagnosis was not confirmed by post-mortem examination, have died from other causes.

Pass List.

Examining Board in England by the Royal Colleges of Physicians of London and Surgeons of England.

At the 2nd Professional Examination in Anatomy and Physiology held Sept. 27th and 28th, and Oct. 1st and 2nd, the following candidates were successful:—E, C. Gray, G. H. Howe, W. H. Turner, P. Cauacoud.

Society of Apothecaries of London.

Primary Examination, Part II.

At the Examinations held on Oct. 1st, 3rd and 4th, the following candidates were successful:—

Anatomy.—H. L. Bowen, G. E. W. Felce, M. S. Mahmud, P. L. Richardson.

Physiology.—G. C. W. Curson, G. E. W. Felce, M. A. R. Khalifa, J. H. Sullaiman.

Two Interesting Cases

Taken in under the care of Mr. Steward in July, 1917.

Henry V., a tiny, rather marasmic youth of 30 days, weighing 3½ lbs., was brought up to the Front Surgery on Sunday morning, 29th July, with a fairly large, rather inflamed swelling in the right inguinal canal. The mother had only noticed this the previous day. The swelling was duly examined and considered to be an irreducible inguinal hernia, and various methods were tried to reduce the would-be hernia without any success, so the Take-in H.-S. was summoned, but before he had time to arrive the mother had taken the child home. Fortunately the address was known and the child sent for and admitted into Lydia on Monday, 30th July, 1917. He was operated on shortly after. The incision was made as for a hernia, but no irreducible hernia was found, However, a gangrenous appendix with a small appendicular abscess in a hernial sac revealed itself. An appendicectomy was done, and the child progressed favourably, putting on almost 2lbs. in weight during his three weeks sojourn in the ward, and was discharged cured, due in no little way to the excellent nursing he received.

Doris H., æt. 26, unmarried, was sent up by her doctor on Sunday, 29th July, suffering from an attack of ?appendicitis. Her history dated over a period of about five days, a certain amount of vomiting, exceedingly tender over McBurney's point, and somewhat rigid. Her temperature was just over 100° and her pulse about 90. No immediate operation was, however, considered necessary and Mr. Hughes saw her on Monday, when it was noticed the patient complained of pain over the pelvic region. She was operated on, apparently for appendicitis, but as soon as the peritoneal cavity

was opened, some bleeding point appeared unwilling to be stopped. After several futile attempts to arrest the hæmorrhage, an inspection of the pelvic organs was made, and there it was found that the right ovary was ruptured, the cause of all the bleeding. This was removed, and, a section being cut, it was proved to be a ruptured ovarian gestation. The appendix certainly showed signs of recent trouble. An appendicectomy was performed, and the patient was well enough to depart to the Schiff Home on the tenth day following her operation, where she got completely fit.

Thanks are due to Mr. Hughes for permission for the recording of these two cases.

Appointments.

A.M.S.

Temp. Lieut.-Col. to be Temp. Col.—Sir W. A. Lane, C.B.; C. J. Symonds, C.B., C.M.G.

R.A.M.C.

Major R. Davies-Colley to be Temp. Lieut.-Col. whilst specially employed.

Temp. Lieuts. to be Temp. Capts.—A. H. Davies, R. S. Kennedy, F. W. M. Palmer.

To be Temp. Lieuts.—F. D. Crew, H. D. Wyatt, L. E. C. Handson, D. H. Trail.

Special Reserve of Officers.—S. Riddiough, from Unattached List (T.F.) to be Lieut.

Officers relinquishing their Commissions.—Temp. Lieuts. W. S. Kidd, H. W. Heasman. A. Kinsey-Morgan.

Territorial Force.

Capt. (Temp. Major) W. B. Secretan relinquishes his temporary rank on alteration in posting, and is restored to the establishment.

Civil.

H. P. Whitworth, L.R.C.P., M.R.C.S., has been appointed Medical Officer for the St. Agnes District by the Truro (Cornwall) Board of Guardians.

R. D. Tanner, L.D.S. Eng., has been appointed School Dentist at Huddersfield.

H. P. Taylor, L.D.S. Eng., has been appointed School Dentist for Derbyshire.

F. J. Pearce, L.D.S. Eng., D.D.S. Penn., to be Dental Surgeon to St. Katherine's Lodge, Regent's Park, N.W., for American and British Officers (the first American Red Cross Hospital established in Europe).

An Interesting Abdominal Case.

Impacted Gallstone Simulating Intestinal Obstruction.

Mrs. H., aged 63, first complained of abdominal pain and nausea on October 3rd, 1913. She took some pills, and, on the following day, after an attempt to go to stool, she was seized with great pain in the lower right side of the abdomen, which became increasingly worse and vomiting became incessant. Repeated enemata and purgatives were rewarded by neither fæces nor flatus. I was asked to see her on October 6th with a view to relieving her obstruction. She was an enormously fat and apprehensive individual, and when asked to explain the situation of the pain, she laid both hands across the abdomen below the umbilicus. In character the pain was constant with recurring attacks of increasing severity. On examination the abdomen was tender all over, but more so below the navel. Nothing more could be determined owing to the thickness of the parietes. The rectum was empty and ballooned. Temperature 100·6° F., pulse 120. I confess the impression I received was that of a low, small intestine obstruction. A median sub-umbilical opening was made and the bowel, both large and small, seemed to be in a state of moderate distension, but no organic obstruction could be found. I then passed my hand up to explore the gall-bladder and cystic duct, and here lay the cause of all her trouble. There was a large stone, 1·5 c.m. in diameter, impacted in the cystic duct, and some others also were present in the gall-bladder. It was thus apparent that the condition was one of an absolute reflex inhibitory constipation rather than a true obstruction. After closure of the lower wound cholecystostomy was performed. The pain ceased and the bowels moved without difficulty

on the third day. One of the interests attaching to this case was the misleading distribution of the pain, it being chiefly referred to the lower abdomen when the true lesion lay in the upper abdomen.

NORMAN FLOWER,
M.B., B.Ch. Oxon.
Assistant Surgeon, Yeovil Hospital.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

The Cheapening of Medical Education.

SIR,—You were kind enough to publish in your last issue a communication from me upon the cheapening of Medical Education, in which I urged as a means to this end, additional to direct State subsidies to medical schools, the establishment of National Medical Scholarships. In a friendly criticism of my suggestion you express the fear that such a proposal might be regarded as assisting the wealthy classes at the cost of the poor. It appears to me, however, that while this objection might be raised to the present system of Board of Education grants made to Medical Schools which are not, as a condition of receiving them, required to lower their fees, the institution of National Scholarships would as a matter of fact to a large extent remove this objection. As at present arranged a Student obtains direct pecuniary advantage from the Board's subsidy, though of course the nation as a whole profits by the improvement in the education of its future medical attendants.

By the system of National Medical Scholarships a certain proportion of the sons of the poorer people, who by means of the educational ladder, are now enabled to secure the advantages of University training, would become eligible for free vocational education in medicine. Medicine, instead of being as it is at present a calling exclusively reserved for the comparatively wealthy, would be thrown open to all classes. Elementary school children, who by their mental attainments showed special aptitude, might look forward by the help of such scholarships to serving their country in the ranks of the medical profession.

Whilst sincerely hoping that the Treasurer and Governors of Guy's may view with favour your suggestion that they should open a fund to provide scholarships for the sons of old Guy's men and others who have fallen in the war, I think that this will merely prove an incentive to a wider movement whereby the State may make the profession of medicine more accessible to well qualified recruits who are at present excluded solely on account of their economic condition.—I am, yours, etc.,

YOUR CORRESPONDENT.

Oct. 11th, 1917.

Medical Books for Prisoners of War.

DEAR SIR,—May I through the columns of your Journal call attention to the needs of British prisoners of war for medical books. The British Prisoners of War Book Scheme (Educational) receives numerous requests for such books of all standards and on a great variety of subjects. These requests come from hospital orderlies, medical students, physicians, surgeons, specialists, etc.

Let each reader of this picture himself in a prisioners' camp without books for study, and do what he can to alleviate the lot of some man so placed. Let him look through his shelves and see what he can spare, and send us a list of the books he can offer. This will be marked to show which books would be of use to us, and returned to him.

Donations to the funds are also urgently needed to purchase books that cannot be obtained as gifts, especially up-to-date technical and scientific books.

All communications should be addressed to me at the Board of Education, Victoria and Albert Museum, South Kensington, S.W. 7, and marked "Prisoners of War."

ALFRED T. DAVIES.

Change of Address.

Lieut. S. Vidot, R.A.M.C., from 44th F,A. to attd. 6th K.O.Y.L.I., B.E.F.

(Brev.) Lieut.-Col. C. H. Fagge, R.A.M.C., from 4th C.C.S., B.E.F., to 3, Devonshire Place, W. 1,

2nd Lieut. V. Drew, from O. i/c 12th Corps, Observation Post No. 1, to attd. G.H.Q.I., Salonica Force.

Surg. Prob. C. T. Helsham, D.S.C., from H.M.S. *Broke* to The College, Guy's Hospital, S.E.

Col. A. C. Astley Roberts, R.F.A.T., from Flanders to Badlesmere, Eastbourne.

Capt. E. R. Saul, R.A.M.C. (Dental), c/o Messrs. Cox & Co., Bankers, Bombay, India.

Temp. Lieut. H. J. Henderson, R.A.M.C., from D.A.C., B.E.F., to Attd. 2nd Bttn. the Essex Regiment, B.E.F.

H. V. Vogt, L.D.S., c/o W. P. C. Ashdown, L.D.S., Jesmond Dene, Wellington Road, Bournemouth.

Major Wilson Tyson, R.A.M.C. (T.), The Beeches, Lowestoft.

Lieut. E. Morgan, R.A.M.C., from Groombridge, Sketty, to Deccan Hospital, Poona, India.

Trade Announcements.

Rubberine Tyre Fillings.

Rubberine, Limited, the manufacturers of the well-known Tyre Fillings, have removed to more commodious premises, and all communications and goods should be addressed to Rubberine, Limited, Market Road, Caledonian Road, N. 7.

Mary's Ghost.

A Pathetic Ballad.

By THOMAS HOOD.

1

'Twas in the middle of the night,
To sleep young William tried;
When Mary's ghost came stealing in,
And stood at his bed-side.

2

O William dear! O William dear!
My rest eternal ceases;
Alas! my everlasting peace
Is broken into pieces.

3

I thought the last of all my cares
Would end with my last minute;
But though I went to my long home,
I didn't stay long in it.

4

The body-snatchers they have come,
And made a snatch at me;
It's very hard them kind of men
Won't let a body be!

5

You thought that I was buried deep,
Quite decent like and chary,
But from her grave in Mary-bone
They've come and boned your Mary.

6

The arm that used to take your arm
Is took to Dr. Vyse;
And both my legs are gone to walk
The hospital at Guy's.

7

I vowed that you should have my hand,
But fate gives us denial;
You'll find it there, at Dr. Bell's,
In spirits and a phial.

8

As for my feet, the little feet
You used to call so pretty,
There's one, I know, in Bedford Row,
The t'other's in the City.

9

I can't tell where my head is gone,
But Doctor Carpue can;
As for my trunk it's all packed up
To go by Pickford's van.

10

I wish you'd go to Mr. P.
And save me such a ride;
I don't half like the outside place
They've took for my inside.

11

The cock it crows—I must be gone!
My William, we must part!
But I'll be yours in death, altho'
Sir Astley has my heart.

12

Don't go to weep upon my grave,
And think that there I be;
They haven't left an atom there
Of my anatomie.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Diseases of the Throat, Nose, and Ear. By William Lamb. Fourth Edition. Published by Baillière, Tindall & Cox, London, 1917. Price, 8s. 6d.

This is a new edition of a book that has been widely used by students who are beginning work in Ear, Nose, and Throat departments. Though it does not differ very materially from previous editions there are a certain number of additions. A considerable amount of space is devoted to descriptions of the methods of examination employed. The author insists that the student must aim, above all, at the mastery of the methods of examination. Once he becomes expert in these the rest is comparatively easy. Though not all students have the opportunity of doing appointments of the Ear, Nose, and Throat departments, a certain knowledge of the work is required if a man is to become an efficient practitioner. We strongly recommend this small book as an introduction to the subject.

Diseases of the Skin. By Sir Malcolm Morris, K.C.V.O Sixth Edition. Published by Cassell & Co., Ltd., London. Price, 12s. net.

This is a new edition of a work first published in 1893, which has earned a reputation as a standard work on the subject with which it deals, Six years have elapsed since the last edition. In the present volume there is no great increase in the number of pages, but space has been economised by printing the articles on the rarer diseases in small type. The section on syphilis has been greatly enlarged and brought up to date. Full details are given of the newer arsenical compounds used in the modern treatment of syphilis, such as kharsivan, galyl, and arseno benzol, and some particulars are given of the modern methods of administration as practised at Rochester Row.

The illustrations are very much the same as in the last edition, but there have been a few additions.

We have no hesitation in recommending this book to students and practitioners. Those whose work lies in

the venereal clinics recently established under the Local Government Board, will find the chapters on syphilis very helpful.

Insanity in every-day practice. By E. G, Younger, M.D. Brux.. M.R.C.P. Lond. Fourth Edition. Published by Ballière, Tindall & Cox, London. Price 5s. net.

Thougn this small book does not attempt to do more than give a brief summary of the subject, it is one which has already in its earlier editions proved most useful both to students and practitioners. The section on the examination of a patient with a view to certification is written in an admirably clear and practical manner, and in an appendix are copies of the Statutory Forms of the Ordinary Lunacy Certificate and of the Urgency Order. Short sections have been added on neurasthenia and on psycho-analysis. The various forms of insanity are dealt with shortly but clearly, and the book should be most useful both for examination purposes and from a practical point of view.

A Text Book of Surgery. By Richard Warren, M.D., M.Ch. Oxon. Published by J. & A. Churchill in two volumes. Price, 25s. net.

Mr. Warren's Text Book of Surgery has taken a place among the standard works in use among students. A clear account is given of the best surgical methods at present in use, and the author directs attention paricularly to those which in his experience have proved sound and satisfactory. We are glad to see that many of the older and more obsolete methods preserved in other text books have been dropped. This is a most admirable advance in the writing of books for students, for it is only too true that both in surgery and medicine text books continue to retail as facts things that have not been believed for decades.

The two volumes contain about 1,400 pages, which is, perhaps, somewhat long for a text book, On the other hand we think it would be difficult to decide on any portion of the book that could be omitted without reducing efficiency.

The type is clear and the illustrations excellent, and we have no hesitation in recommending the work as one suitable for senior students and practitioners.

Surgical Nursing and After-Treatment. By H. C. Rutherford Darling, M.D. Published by J. & A. Churchill, 7, Great Marlborough Street, W.

This book should prove a great help both to students and nurses. Surgical nursing, both general and regional, is well taught, bandaging and splints are fully dealt with, and the preparation of theatre, instruments, sutures and dressings for operations is well described. Perhaps one of the best features of the book is the concise manner in which the after-treatment of operation cases is dealt with, and the possible complications which may occur.

Papers by Guy's Men.

H. J. Corin, L.D.S.: Petroleum in the treatment of pyorrhœa alveolaris.—*The Dental Record*, Oct., 1917.

T. B. Layton, M.S. Lond., F.R.C.S. Eng.: Surgery next door to the Front.—*The Lancet*, Sept. 29th, 1917.

Arthur F. Hurst, M.D., F.R.C.P., Temp. Major R.A.M.C.: Exhaustion resulting in neurasthenia and soldier's heart.—*The Brit. Med. Journ.*, Sept. 29th, 1917.

Major Philip Turner, F.R.C.S., R.A.M.C. (in collaboration with Captain G. Richardson, R.A.M.C.): The treatment of wounds infected with bacillus pyocyanæus. —*Ibid.*

Arthur F. Hurst, M.D. Oxon., F.R.C.P. Lond., Temp. Major R.A.M.C., and E. A. Peters, M.D. Camb., F.R.C.S. Eng.: A report on the pathology, diagnosis and treatment of absolute hysterical deafness in soldiers. Two cases of hysterical deafness cured by "operation." —*The Lancet*, Oct. 6th, 1917.

A. R. Thompson, Ch.M., F.R.C.S.: The form of the urinary bladder.—*Journ. of Anatomy*, July, 1917.

C. E. Iredell, M.D., M.R.C.P.: On muscle testing in the wounded.—*The Clinical Journ.*, Oct., 1917.

A. P. Allan, M.D. Lond.: Treatment of enuresis by hypnotism.—*Ibid.*

J. B. Hance, M.B., B.C. Camb., M.R.C.S. Eng., L.R.C.P. Lond., I.M.S.: A case of compound fracture of the patella treated by wiring.—*The Lancet*, Oct. 13th, 1917.

Russell J. Reynolds, M.B., B.S.: Methods employed in the X-Ray Department of a Military Hospital, with a few notes on one or two cases of interest, and on the treatment of trench foot adopted there.—*Journ. of the R.A.M.C.*, Sept., 1917.

Major Gerald Sichel, R.A.M.C.: A case of gunshot wound of head.—*Ibid.*

Captain C. P. Symonds, R.A.M.C.: Note on a case of traumatic hernia of the diaphragm proving fatal seven months after wound.—*Ibid.*

T. Wilson Smith, M.D., M.R.C.P. Ed.: Medical aspects of disorders of the teeth.—*Brit. Dent. Journ.*, Oct. 15th, 1917.

Births.

SHERRIS.—On the 24th Sept., at Ripon Lodge, Denmark Hill, to Capt. Sherris and Mrs. Sherris, a daughter.

WILSON.—At Eagle House, Blandford, on Sept. 21st, 1917, the wife of Dr. A. Read Wilson, of a daughter.

J. J. C.

Sub. Lieut. J. E. MAXWELL,
R.N.V.R.
KILLED MARCH 30TH, 1917.

Lieut. J. J. A. BOUIC,
R.F.C.
KILLED MARCH, 1917.

Capt. A. TRAILL,
R.A.M.C.
DIED ON SERVICE, SEPT., 1917.

Lieut. M. W. A. SANDOE,
DEVONSHIRE REGIMENT.
KILLED IN ACTION, MAY 17TH, 1917.

Lieut. T. F. P. T. DENNETT,
QUEEN'S ROYAL WEST SURREY REGIMENT, ATTACHED R.F.C.
KILLED IN ACTION, AUGUST, 1917.

GUY'S HOSPITAL GAZETTE.

VOL. XXXI., No. 765.] NOVEMBER 3, 1917. [SIXPENCE.

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Passim.

WE wish to congratulate all those who have been successful in the recent Conjoint and other examinations. The results have been extraordinarily good and show that the teaching at the Hospital has not in any way suffered in spite of the reduction of Staff. This speaks volumes for the energy of the remaining members of the Staff.

WE publish the list of the new Residents and offer our congratulations to those who have obtained appointments. We hope they will succeed in maintaining the efficiency of the last set of Residents, the majority of whom are about to leave us. We wish them the best of luck in the future.

AT the recent Examination for the Membership of the Royal College of Physicians, Mr. J. J. Conybeare was successful. We offer him our heartiest congratulations. Mr. Conybeare qualified only last July, and during the last three months has not only acted as House-Physician to Dr. Hale White and Dr. Shaw, but has in addition been Editor of the GAZETTE as well as President of the Residents. We believe this record almost unrivalled in the history of the Hospital.

WE hear that a meeting was held concerning the Out-patients' Christmas Tea. We understand that certain members were in favour of not having a Tea this year on account of the difficulty of obtaining sugar and perhaps tea. As the fund has something like £150 balance, it seems a great pity to drop this Tea. If lemonade were substituted for tea, and more buns and cakes supplied, these difficulties could easily be met. On the whole, we feel confident that if these arrangements were left in the hands of those Sisters who take so great a pride and joy in providing this feast for the Borough children, the catering difficulties would easily be overcome.

A MEETING of the GAZETTE Committee was held on Thursday, the 25th inst. The Editor's resignation was accepted, and the Chairman, Dr. Shaw, thanked Mr. Conybeare for the able way in which he had conducted the affairs of the GAZETTE. It is to be regretted that so few members put in an appearance, and we hope that at future meetings the attendance will be better.

THE Physiological Society has begun its new Session and we print elsewhere an account of its first meeting. It seems strange that no attempt has been made within the last two years to restart the Physical Society. The

feeling that men ought to qualify as soon as possible is to be respected, but we believe that a meeting every fortnight on some controversial subject would rather diminish than increase the burden of those men about to qualify. It would tend to give an interest to otherwise uninteresting work, and this is often half the battle.

We have received information from a reliable source that further modifications are about to be made in the regulations which control the recruiting of medical students for combatant military service. Sir Auckland Geddes has realised that shortly there will be a serious shortage of medical men, and he has been able to insist that certain medical students should be allowed to continue their studies. A memorandum to this effect may be issued within the next few weeks, so that some remarks on the subject in the present issue of the Gazette may be of some value.

There is a general feeling that once a student has registered as a medical student he should receive the same treatment as a man who is about to enter the wards. We agree that a man who is acting as a private in the army is certainly more useful in his medical capacity even if he has not passed his first medical examination. On the other hand, we doubt whether there is much justification for demobilising combatant officers who have reached only this stage in their medical career. Again, with combatant officers and men who are within six months of taking examinations which would enable them to enter the wards, there can be no question that their demobilisation is essential if the Medical Services are not to suffer. It is to be remembered that possible first year medical students are at present increasing in numbers and that the Public Schools hold a good reserve. We would accordingly suggest that all men capable of entering the wards within a few months should be demobilised, and that the same treatment be given to medical students not so far advanced, who hold no commission. As these have not been granted within the last eighteen months to men who have not seen service, this scheme of demobilisation will considerably augment our numbers.

It is a remarkable fact that the War Office should have taken over three years to realise that medical students are more useful in their proper sphere than Cannon Fodder. This Germany realised within the first few months of the war, and the result is seen in her ready supply of medical men. The Government and War Office can offer no excuse, for two years ago distinguished members of the profession interviewed Mr. Asquith, who was so impressed by their arguments in favour of the retention of medical students that a memorandum was drawn up and transmitted to the War Office. There, however, the recommendation encountered the fate of all suggestions not emanating from the brains of the local bureaucrats and found a home in some waste paper basket. The Army Medical Service have so outrageously mismanaged the question of recruiting that only after it had been transferred to other hands was the obvious step of conserving the national supply of medical men taken.

The story of the various phases of the recruiting question during the last three years, as far as medical students and medical men are concerned, is interesting. The outbreak of war found many students and even a few qualified men already enrolled in various combatant units. Within a few days many others, in their eagerness to see something of the war, joined the forces in all capacities, from that of motor cyclist to R.A.M.C. orderly. Thus at the very outset the ranks of medical students were seriously depleted. The idea of a war lasting at most a matter of months rather than of years was generally prevalent. The rush to get to "the Front" resulted in the loss for

ever of many who might otherwise have been useful members of the Army Medical Corps.

THE GAZETTE may well congratulate itself on the sane advice it gave to students and residents as long ago as August, 1914. In Passim of that issue we read: "We must avoid panic, and not let the excitement of the moment cause us to neglect our duties to the Alma Mater which has given us our professional training, and so placed us at an advantage over thousands of unskilled workers in this time of trial. Let us remember that there is noble work to do here. Heaven knows it is hard enough to stay! But we must restrain ourselves, bearing in mind that 'They also serve who only stand and wait.' It is the duty of every remaining man holding an appointment to abide loyally by the decisions made by the Governors and Staff of the Hospital."

Gradually as the war dragged on from months into years it was realised that medical men were urgently needed both for the R.A.M.C. and for the civil population. In the later part of 1915 a War Office letter authorised medical students in combatant units who had reached their fourth or fifth year of medical studies to return to qualify. This enabled a certain number of students to return to the Hospital. Meanwhile, however, the School was being depleted of students who had done anything up to three years' study. In a GAZETTE even as late as January, 1916, there was a letter from a member of the Guy's Staff appealing to students to leave their studies. Luckily, however, so short sighted a policy was not followed extensively, and there has been an increasing tendency during the last two years for those who had left to return, and for those who are still here to remain until they reach qualification. It seems that the new recruiting authorities are determined to keep up the supply of medical men, and in the near future many old students may be expected to return to their work.

Obituary.

Temp. Capt. WILFRID THOMAS CHANING-PEARCE, M.C., R.A.M.C.

It is with very deep regret that we have to announce in the casualty list the name of Temp. Capt. Wilfrid Thomas Chaning-Pearce, M.C., R.A.M.C., the third son of Dr. and the late Mrs. Chaning-Pearce, of Montague House, Ramsgate. He was educated at "Lindenthorp," Broadstairs, and Rugby, and later entered Emmanuel College, Cambridge, where he took his Science Tripos and commenced his medical studies. Continuing at Guy's in 1908 he held numerous appointments, and was held in very great esteem by all with whom he was associated in any way during that time, until his departure on qualifying early in 1911.

Soon after the commencement of hostilities he joined the R.A.M.C., and had been serving in France practically since that time.

No mention of how the Military Cross was gained has been received by the family, except in the bare official announcement that it had been bestowed early in the September of this year.

The Colonel writing says:—"As the officer commanding the battalion he served with us so long and so devotedly, I thought I would like to write and tell you what a grievous blow his death is. As you know, he has been with us some twelve months, taking part in three general actions and numerous smaller engagements. His absolute contempt for danger and cheerful endurance of exposure and hardship were known to all, and his personality was such that he instilled confidence into those around him in moments of greatest stress. No man more thoroughly deserved the M.C. which he won for his gallant conduct in recent operations. As a Regimental Medical Officer he was the best I have ever met, in many years' service, and no trouble was too much for him in his efforts for the health and wellbeing of both officers and

men of the battalion. He met his death on October 1st, being shot by a German at close range while trying to find one of our forward companies. His body was recovered at the second attempt that night. He was buried yesterday, October 2nd, at 3.30 p.m., with such military honours as were possible under the circumstances. With the deepest sympathy to you and all others near and dear to him, from all the officers of the battalion, and particularly from those on the headquarters, with whom he lived on terms of close personal friendship."

His early death will be a very severe blow, not only to his home circle throughout the Isle of Thanet, but also to the much wider circle of friends which he made wherever he went, and we wish to express our deepest sympathies to Dr. Chaning-Pearce and his family for the loss not only of a son, but one whose life held out so much future promise.

Change of Address.

Surgeon H. Corry Mann, M.D., R.N., from Royal Naval Hospital, Bighi, Malta, to Royal Naval College, Osborne, Isle of Wight.

A. J. K. Drew, M.R.C.S., L.R.C.P., Throat Hospital, Golden Square, Regent Street, S.W.

Surgeon A. B. Danby, R.N., from H.M. Monitor XVIII., c/o G.P.O., to Royal Naval Barracks, Devonport.

Lieut. L. D. Wright, M.D., R.A,M.C., 40th British General Hospital, Basra, M.E.F.

Papers by Guy's Men.

Hildred Carlill, M.D. Cantab., M.R.C.S. Lond., R.N.: A Report on the cases of Syphilis of the Central Nervous System observed in the Neurological Department of the Royal Naval Hospital, Haslar, during twelve months.

G. W. Nicholson, M.D., B.C.: The Formation of Bone in a Calcified Epithelioma of the Skin, with some remarks of Metaplasia.—*The Journal of Pathology and Bacteriology*, July, 1917,

H. M. Page, F.R.C.S. Eng.: Ether-oil Anæsthesia by the Rectum.—*Lancet*, October 27th, 1917.

Lieut.-Col. Alfred J. Hull, F.R.C.S., R.A.M.C.: The Cure of Inguinal Hernia.—*B.M.J.*, October 27th, 1917.

Notices.

The Bradshaw Lecture.

Sir John Bland-Sutton, F.R.C.S., is delivering a lecture on "Misplaced and Missing Organs" at the Royal College of Surgeons, Lincoln's Inn Fields, on Thursday, November 8th, at 5 p.m. Medical Students will be admitted on presenting their visiting cards.

On Monday, November 5th, Mr. Shattock begins the first of three demonstrations on "Inflammation and Gunshot Injuries." These will be held at the Royal College of Surgeons, and are also open to all students.

The Chesterfield Lectures.

Readers are reminded of these lectures which are held three days a week at the St, John's Hospital for Diseases of the skin, Leicester Square. These lectures are open to medical students free of charge. After each lecture a demonstration of cases follows, so that one has every opportunity of becoming familiar with the more common skin diseases and their treatment.

The Wills Library.

Mrs. E. Milward, widow of the late J. Milward, Esq., M.D., has kindly presented to the Wills Library a number of beautiful engravings depicting "Old Bristol." They are on view on application to the Librarian.

Roll of Honour.

Killed.

Temp. Capt. W. T, Chaning-Pearce, R.A.M.C.

Capt. N. H. W. Saw, M.C., R.A.M.C., attached Worcestershire Regiment.

Capt. C. Weller, R.A.M.C.

Wounded.

Capt. A. Morris, R.A.M.C.

Capt. E. H. Griffin, M.C., R,A.M.C., attached Northumberland Fusiliers.

M.C.

Temp, Capt. H. H. Elliott.

Temp. Capt. J. A. C. Greene.

Lieut. S. Vidot (Special Reserve).

The Functional Results of Fractures.

CLINICAL LECTURE BY W. H. TRETHOWAN, F.R.C.S.

GENTLEMEN,—I have brought a few cases of fracture from the Massage Department for your inspection, and to demonstrate how in the later stages of treatment you may estimate the progress of recovery and determine further indications for treatment, as well as pointing out the remedial measures that may be adopted.

The first case is that of a boy of 15 who fractured his astragalus about 20 weeks ago. The second is a man of 35 who crushed his os calcis 9 weeks ago. Compare the two cases. In regard to the appearance of the two feet, you will notice that that of the boy is displaced inwards relative to the leg, while that of the man shows no deformity other than a swelling on each side of the heel below the malleoli. Now see each case walk, as the real test of the machine is to see it at work. The boy has a marked limp, he walks with the foot very much turned out, having no independent movement in the foot, but merely using it as a pedestal. He tells us that a little walking soon makes him very tired, and that he is not long free from pain on use. On the other hand, the man walks with no limp, does not evert the foot, uses it with a proper toe and heel action, gets no undue pain, and can walk considerable distances. We have now compared the structure or anatomy in the two cases, and we have observed the ability of the respective feet to do their work. The boy's injury is much older than the man's, but even with youth in his favour he is far more disabled than the man.

Let us now investigate the disability in particular and determine its elements so to speak, for by that means we shall get a clearer insight into what is wanting and assist ourselves in selecting the necessary remedial measures.

I am accustomed to point out that the essential features of disability are weakness, pain, and restriction of movement, and the most important of these is restriction of movement. In passing, I would complete the list by adding undue mobility, vaso-motor changes and œdema, and nerve phenomena. But let me impress upon you the importance of the first three features.

Examining our two cases we see that the boy's voluntary movements of the foot and ankle are extremely limited. On passive movement, dorsi-flexion, which should be 10 degrees beyond a right angle, is about 30 degrees short of the normal; plantar-flexion, which should be such that the dorsum of the foot comes almost into a straight line with the front of the leg, is deficient by half a right angle. He has a passive range only of about 25 degrees. The range from abduction to adduction (pronation and supination), normally about 60 degrees, is nil. In the man's foot dorsi- and plantar-flexion are normal; the abduction and adduction movement, though better than the boy's, is very little. In making this examination we always take as our standard for comparison the movements of the unaffected opposite limb. This comparison also shows us that the wasting of the leg muscles controlling the foot is greater in the boy's case than in the man's. Muscle wasting means muscle weakness, but this element is secondary to and consequent upon the restricted movement. The element of pain in each case we can ignore for the present, as it is not a symptom retarding progress, and therefore calls for no special treatment.

The next case I want to show you is that of a woman of 50, who about 6 months ago fractured both bones of the leg an inch and a half above the ankle joint. There is no deformity, and the only thing obvious on inspection is

some general thickening and œdema about the lower part of the leg and ankle joint. Now see her walk. She is very weak in the leg, can hardly go unsupported, has a marked limp, and puts the weight only on the heel, relieving the weight with the other leg as quickly as possible in each step. She is very disabled, and tells us there is considerable pain felt with each step. Her structure or anatomy we will pass as being as perfect as can be obtained, but about three months ago when first allowed to get about, she was found to have a considerable angular deformity forwards at the seat of the fracture, so much so that the front of the leg appeared to overhang the dorsum of the foot, the case looking something like a posterior dislocation of the foot at the ankle joint. Functional treatment was tried for some time, but it was soon realised that the degree of deformity, if left, would prevent her having any use whatever of the leg.

The report of the Committee on Treatment of Simple Fractures appointed by the British Medical Association 12 years ago points out that although the functional result may be good with an indifferent anatomical result, the most certain way to obtain a good functional result is to obtain a good anatomical result, and also that no method of treatment, whether non- operative or operative, which does not definitely promise a good anatomical result should be accepted as the method of choice. To improve the anatomical result in the woman's case the fracture was manually broken down 3 months after the original injury, the alignment restored, and the leg fixed up in plaster for another six weeks until the union and position were, as you see now, good. On examining her foot, all movements are found to be so extremely restricted that passively we are hardly able to move it at all without giving her considerable pain. Hence her discomfort on walking. This is a case where the painful element must seriously be considered, as it is retarding her progress.

Granting that complete restoration of structure gives us the best chance of a satisfactory return of function, we must next consider what are the important elements of deformity in a fracture case. If the fracture be simple and the bones united, I should say the most important were angularity of union and rotation of fragments; these elements may be combined. Next in order of importance, but only in the leg, is shortening. Besides these are impaction of fragments and excessive callus formation.

Now see my fourth and last case, examining her from the above-mentioned points of view. She fractured the shaft of the humerus at its middle five weeks ago. How is she progressing? There is no deformity, union satisfactory, alignment good, end to end apposition, and no undue callus formation. The movements of the elbow joint are complete in flexion, but a little restricted in extension; the shoulder-joint is somewhat restricted in abduction, from a postural cause; forearm and hand movements are complete ; no nerve is involved and voluntary movements are good; there is no pain, but the seat of the fracture is tender on pressure, showing that consolidation is not yet complete; wasting is not excessive, and circulatory changes are absent. Hence we may say that functional restoration is taking place rapidly and the patient will soon be quite cured.

In the report above referred to, the object of which was to compare the results of treatment in simple fractures of the long bones by the alternative methods of operative and non-operative procedure, some interesting figures were given as to the restoration of function. If the anatomical result is good the function is good in 90 per cent.; if moderate or bad, the function is good in only 30 per cent.; if bad, the function is bad in 53 per cent. It is said to be possible by either operative or non-operative

treatment to obtain a high percentage of good results in children under 15 years of age; that in comparison with the non-operative results in children, the aggregate results of non-operative treatment in those over the age of 15 are not satisfactory. There is a progressive depreciation of the functional result of non-operative treatment as age advances, *i.e.*, the older the patient the worse the result. In cases treated by immediate operation the deleterious influence of age upon the functional result is less marked. In nearly all age groups operative cases show a higher percentage of good results. In non-operative cases those under the age of 15 give 90 per cent. good results, while over the age of 15 they are only 45 per cent. In operative cases under the age of 15 there are 93 per cent. good results, while over 15 there are 66 per cent. Temporary incapacity from work in non-operative cases under the age of 15 is, on an average, 15 weeks, while over the age of 15 it is 28 weeks; permanent incapacity is found in 9 per cent. In operative cases under 15 the temporary incapacity is 12 weeks, while over the age of 15 it is 27 weeks; permanent incapacity is found in 8 per cent.

Let us return to a closer investigation of the causes of the various elements of disability, and we will begin with the most important, namely, *restriction of movement*. Bones in themselves have two functions, firstly, their use as levers for the *indirect* transmission of force, that is to say, the simple order of machine, and, secondly, for the *direct* transmission of force such as weight bearing and pulls. Nearly all the leverage actions in the body are those of the third order, in which the range of action of the "force" is considerably less than that of the "weight" or point to be moved. This is the order which is least frequently used in general mechanics outside the body, and in this order work is expressed as being done at a mechanical disadvantage. The compact human body has no capacity for big ranges of movement in the muscles themselves. They must necessarily move over a small range, and to transmute their movement into external motion they are so made as to exercise a great force over a small range of action, while the equivalent of the muscular work is done on the external object by moving a lesser force (the weight) through a bigger range.

Mechanical work is force multiplied by distance, and the work done on the external object is equal to the work done by the muscles. The fulcrum of the body lever is at the joint. The muscles can only act if the joint be perfect. All leverage action depends, therefore, on the joints. In weight bearing, and in pulls such as hanging by the arms, the joints are unnecessary when once the position has been assumed. If, therefore, a joint is uncontrolled on account of paralysis of its muscle it is a source of weakness, and for this direct passive transmission of force the joint would be better stiff in the position best adapted to the transmission of the force. Hence, if we have total permanent muscular paralysis we stiffen the joints artificially, either by surgical operation to produce anchylosis (arthrodesis), or by the external application of non-hinged splints. In this connection I would draw your attention to the most advantageous position for any joint that is likely to remain permanently stiff. For the shoulder the upper arm should be abducted about 60 degrees from the body, and about 30 degrees forward. The elbow is generally best at a right angle, but this will depend on whether it is the right or left, and on the occupation of the patient. The wrist should always be well dorsi-flexed, and the finger joints somewhat flexed. The hip should be extended in a straight line with the body. The knee should be slightly hyper-extended and the foot at right angles with the leg. The big toe-joint should be slightly dorsi-flexed.

In the treatment of joints, excision is often done, either as a primary measure to combat sepsis or bad displacement from fracture, or, secondly, to produce movement (arthroplasty). The success attending such measures is all too frequently very little. That this must be so will be apparent to you from the fact that most of the muscles have either their origin or insertion close to the joint, and the sacrifice of the end of the bone in an excision means the obliteration of that arm of the lever extending from the fulcrum to the point of application of the muscular force. If mobility is procured in the excised joint it is often excessive or "flail" from incorrect movement of the point of application of the muscular force due to the loss of the fulcrum fixation point. Hence undue mobility in a joint is often a greater disability than restricted movement. I am accustomed to emphasise that the whole of limb surgery in its greater or mechanical aspect can be summed up in the three words—*range of movement*.

Always bear in mind the normal range of movement of the joints. Always test passively the range of movement of the joints in investigating any pathological condition associated with it. This maxim applies to disease as well as to injury. The criterion of limb disability is joint rigidity, merely excepting cases of undue mobility.

What are the causes of joint restriction? They are—spasm, either reflex or functional; contracture of tendons and all other soft tissues, not forgetting the skin, due to posture, gravity, and uncontrolled muscular action; adhesions within and without the joint; alteration of joint shape and surface, such as osteophytes, exfoliation of cartilage, and loose bodies; changes in the synovial membrane; intrinsic anchylosis in all its various forms; vicious union of parallel bones; and myositis ossificans. In addition, in compound fractures we must reckon with scars and sinuses. Excessive mobility may be due to a flail joint, or again to a false joint as the result of non-union; in the latter case the disability is the result of the inability to transmit normal force through the bone levers. So much for joint movement.

Muscular weakness shows itself by wasting, loss of power, and inco-ordination, or a limping gait in complicated movement. It can result from the cutting off of the nerve impulses by direct injury or disease of the nervous system; from atrophy, either reflex or from disuse; and from excessive use and over-exertion due to static conditions, as in the quadriceps in walking with flexed knee, and to want of muscular balance from contracture of antagonistic muscles.

Pain may be due to many causes, such as the friction of ununited fractured surfaces; the pull on adhesions; the rubbing together of inflamed joint surfaces (traumatic arthritis); joint swelling; and circulatory stagnation and œdema. Over-exertion of weakened muscles will give rise to fatigue.

Œdema and inhibition of venous circulation may result from direct obstruction of the lymph and venous channels, but the more common cause in the leg is passive congestion resulting from the absence of the pumping action on account of stiffened joints and wasted inactive muscles. In other words it is postural, and due to the effect of gravity.

We will now consider the remedial measures available for the correction of deformity and removal of disability. In the term deformity I include only that directly due to altered position and shape in the bones themselves. Deformity due to incomplete movements of joints, for example, flexion contractures, results rather from the soft parts, and we will consider it under the term disability. In any fracture showing angular union an attempt should be made to restore the alignment. In the first two weeks, before the callus has become ossified, this may very easily be done manually.

Later, when consolidation is complete, even up to several months after the fracture, it is not difficult to break through the union, as the callus very easily gives way when the limb is bent over a wedge of wood at the seat of fracture. This operation is known as osteoclasis. When the union has been complete for more than six months it is usually impossible to osteoclase the leg of an adult. An open operation will then be necessary. In such procedure, "resetting" the fracture, we, of course, begin the treatment *de novo*. We are guided by X-ray examination taken before and after each manipulation. The limb is usually best put up in plaster of Paris, this forming no hindrance to skiagraphic examination. Do let me impress upon you the importance of re-adjusting by manipulation any alignment with which you are not satisfied, no matter if it be weeks or months after the original putting up of the fracture. It may be necessary to repeat the process on more than one occasion. When manual osteoclasis is impossible on account of lapse of time and firmness of union, you must resort to open operation (osteotomy). Linear section of the bone, or cuneiform ex-section, will be required according to the deformity present. After osteotomy apposition of the fragments will be maintained by a bone-plate (an internal splint), or external splinting such as plaster. By the osteotomy angular union and rotation may be corrected, as well as the shortening if it be a recent fracture with overlapping. Angularity is of importance in the leg in that it alters the line of weight and the strain upon the joints and ligaments. The constant action of the altered stress causes uneven bearing in the joints, and consequently irritation, pain, and impeded action (traumatic arthritis). Mere shortening with otherwise good alignment is difficult to correct except in fairly recent transverse fractures with overlapping. If for this operation is deemed inadvisable, recourse will be made to a raised boot. If the operation is done, the shortening may be corrected at once, the fragments being held by a plate, or extension may be applied for two or three weeks together with the use of an external splint. In impacted fractures the question of disimpaction will be decided by the necessity for correcting a co-incident angulation, rotation, or shortening. Where there exists a loss of bone substance and the formation of a false joint (pseudo-arthrosis), the bone defect will be remedied by a graft, either transplanted from another bone of the same patient, for example, from the tibia, or cut from the longer fragment and slid down over the gap; the latter is known as a bone-slide. Grafts do not give such absolute fixation as a plate, and can take no strain. They are usually fastened in with kangaroo tendon. Where a big strain is brought about by the correction, it will be necessary to use a plate instead of a graft.

Another operation on the bones is the removal of such projecting bony ridges occurring in angulation as impede joint action. The application of this procedure is limited. Where joint surfaces have through fracture become so irregular as to give permanent and painful stiffness together with deformity, excision of the joint, or of one bone entering into the formation of the joint as in fractured astragalus, may be necessary. In military surgery the question of operating for bone deformity is one of great difficulty. I refer, of course, to gunshot wounds. Most of these have been extremely septic. When, after many months, the wounds have finally healed, the infecting organisms lie quiescent in the scars for a very long time, in some cases probably for a year or two. It is customary now to postpone open operation on such a case for at least six months after the wounds have healed, and in many cases it is

necessary to wait much longer than this. I do not think it is safe to operate on some of these for at least two years after suppuration has ceased. In determining the interval one is guided by the history of the case, and the appearance and extent of the scarring. It is often a good plan to do a preliminary operation to excise as much as possible of the scar tissue without interfering with the bone. When the patient has quite recovered from this, the secondary operation on the bone may be performed. By the primary operation the infective nidus in the scars is ablated, but if any trouble with recurrent suppuration is to occur it will be brought about then without the further and more disastrous implication of the bone. Even manual osteoclasis may be dangerous in these cases of gunshot wound.

Generally speaking, when performing an operation on these war fractures, as little as possible should be done. There should be no unnecessary cutting, stretching, or laceration of tissues. The application of a bone-plate often requires a big wound and much dissection, and this method is, therefore, far more often contra-indicated in military than in civil practice. It may here be added that even in simple civilian fractures the convalescent period may be more protracted after a bone-plating operation, on account of the necessarily bigger dissection giving an additional amount of tissue infiltration and stiffness to be overcome.

In the treatment of joint stiffness your knowledge of the pathology and the history of the case will assist your decision as to the adoption of particular measures. The most widely applicable methods of treatment are—pure massage, passive movements, active movements, heat, stretching by splints and appliances, and tenotomy.

Massage, as distinct from movements, consists of friction to soften indurated tissues, strokings (*effleurage*) to promote the superficial circulation and to relieve muscular spasm, kneadings (*petrissage*) to further the circulation and promote the nutrition of the deeper parts, and the various forms of skin stimulation, such as clapping, *tapotement*, etc. The application of this treatment is a skilled art, and unless properly carried out is either useless or positively harmful. A valuable preliminary adjunct to massage in most cases of fracture in all but the earliest stages is the warming up of the particular part to increase the blood supply and to soften the tissues. Hitherto heat has been applied by the hot air bath, or by the radiant heat bath in which the heat is derived from incandescent electric globes, or by the more homely method of soaking in hot water.

As to the respective efficacy of hot water or hot air, the modern prevailing opinion is that hot water is the better. It is said that the tissues themselves can be raised to a greater temperature by a bath of water maintained at a constant temperature than by a bath of air; in the latter case heat is conducted from the limb by the evaporation of perspiration. It by no means follows that the hotter a limb can be made the better; there is a maximum temperature of efficacy as well as a maximum efficacious duration of exposure. It appears that a hot bath of steady temperature in which the water is in constant motion is of greater utility than still water. This principle was first illustrated in the "*whirl*" or turbine bath, but it is now found that the "*aeration*" bath, in which the hot water is kept bubbling furiously by means of a blast of compressed air, is even more beneficial. The whirl bath is sedative in its action, but the aëration bath is more stimulating.

The temperature of a local bath should be 110—112 degrees and in this the affected part is soaked for 10 but never more than 12 minutes. If, however, the bath be kept at 108 degrees, 20 minutes' exposure will not be too long. If there be liability to trophic changes

in the tissues the temperature should not be more than 105—108 degrees. Where total body immersion is required in an aeration bath the conditions are 100 degrees for 15 minutes; this method is completed by rapid or slow alternate douching from hot and cold hose pipes. Total body aeration is usually used for the later stages of shell-shock and myalgia.

A valuable form of bath for such things as œdema, sluggish circulation, postural changes, fibrous anchylosis, etc., is the "*contrast*" bath. The limb is placed alternately in a hot bath at 114 degrees for 30 seconds and in a cold bath for 15 seconds, and this alternation is carried on for 15 minutes. This bath is contra-indicated where there is much pain, because of the sudden spasm of the muscles which occurs on immersion in the cold water.

Another form of bath in use is the "*pool*" bath, of 94—96 degrees, which is not aerated, but is really a mild whirl. It is used for neurasthenic conditions. The patient sits in it immersed to his neck, keeps quite still, is not allowed to speak, and concludes the treatment with 30 minutes' absolute rest in bed. In the use of the local aeration bath manipulations of the joints are carried out by skilled masseurs while the limb is immersed; this begins after three to five minutes' immersion, and is continued throughout the rest of the exposure.

Although we have to devote so much attention to passive movement, it may be said that the necessity for this form of treatment is often the result of neglect. Speaking generally, pure massage in the treatment of fractures may be utilised from the first, and at the end of the first fortnight, when consolidation has begun, active or voluntary movements may be allowed. If so far as voluntary movement is not painful, it is not harmful; the patient will not willingly hurt himself. Early voluntary movement maintains the nutrition of parts, lessens the tendency to disuse atrophy, and prevents the formation of adhesions. Therefore begin massage from the first, and encourage active movement a little later, thereby reducing to a minimum the necessity for passive movement. Passive movement is an external impressed force whose effect can not always be gauged. When applied too early it will cause rocking at the seat of fracture, will break down healing tissues, and stimulate the formation of excessive callus and adhesions. Generally speaking, passive movement should not be applied before the third or fourth week. When used for breaking down adhesions one movement in each direction will suffice; avoid worrying the part. All too frequently, then, much of the passive movement necessitated in the later stages of treatment is the result of neglect to encourage early active movement.

The capacity for active exercises in the later stages of treatment depends on the amount of movement in the joint. The further extension of active exercise is an early functional use of the limb as far as this can be carried out; in other words, we get the patient to use the limb for its normal purpose.

Industrial exercises, or putting patients to work in workshops, is of great value in that the exercise is both useful and congenial. How much better it is to do productive work than to ride a bicycle screwed to the floor, or aimlessly to pull up and down weights attached to the wall of a gymnasium. Give your patient some useful productive work; do not put him on a treadmill. Where active muscles are yet poorly developed over exertion should be avoided, and this may require the use of appliances limiting the joint action, and thereby the stretch on the muscles. The same restrictive apparatus may be necessary where limited movement is due to irritative muscular spasm.

Passive movements are performed in many ways. The best procedure for combating adhesions following synovitis within the joint, and without in the tendon sheaths, as well as in the muscles themselves, is manipulation of

the joint through its complete range and in every combination of its movement, under complete anæsthesia, followed by active and passive movements, heat and massage.

For joint contracture tenotomy of one or more of the bigger tendons, followed by fixation in plaster, may assist the correction. Remember that all the soft tissues enter into the contracture, including the skin and the joint capsule, and not all of these can be cut. The plaster fixation is as much to take the stretch out of the contracted tissues as to enable the tendon to heal lengthened. Where soft tissues are contracted from prolonged immobility, the so-called "*postural*" fixation, they should not be broken down under an anæsthetic; indeed such treatment would be harmful in tearing ligaments and muscles. What we do in such cases is to stretch the parts as far as possible without tearing them, under an anæsthetic, and fix the joint in plaster in the new position for ten days or a fortnight. That is, we carry the joint through a few degrees only. This procedure can be repeated again and again, the parts gradually stretching under the increasing increments of tension in the successive plasters. Such treatment for instance is adopted in straightening a stiff flexed knee, or flexing a straight one. The same principle is applied in cases of postural or scar fixation of the wrist and finger joints. Here the first essential is to dorsiflex the wrist, then flex the metacarpo-phalangeal joints, and finally the finger joints. Any such stretching splint which allows of easy removal for coincident treatment with massage, baths, etc., is more useful than the irremovable plaster. Therefore I use in such cases a "cock-up" splint to dorsiflex the wrist, together with a glove with tapes sewn on the back of the fingers from base to tip. The tapes are pulled as tight as the patient can bear, and fastened to the upper turned over edge of the "cock-up" splint. Such an appliance, together with the other treatment, quickly promotes the restoration of mobility to the fingers. In general, splints and appliances fitted with joints are of greater utility than when jointless; and again, racks and screws fitted to the joints of the splint are not so serviceable as traction by spiral springs and rubber.

As a preliminary to the stretching of contractures about joints by splinting, it may be advantageous to excise as much as possible of any adherent scar.

Where the movement in a joint, particularly the knee, is painful, and the restoration of further range of movement is unlikely, it is better to aim at total fixation by some anchylosing operation such as excision. On the other hand, where movement can be feasibly procured by surgical operation, and is likely to be of utility to the patient, a modified excision may be done, with the turning in of a flap of fat to produce a false synovial cavity. This is the operation of arthroplasty. In my opinion it is of little use except in the elbow, and possibly also in the hip joint.

In passing, I would mention passive hyperæmia by means of a Bier's bandage as a means not sufficiently used to soften contracted tissues preliminary to movements.

The treatment of primary muscular weakness is essentially that of joint stiffness. Of some service is a painless method of Faradism carried out by means of an induction coil fitted with a condenser. This is really a form of active movement, assisting the nutrition of the muscles but preventing the use of the joints. It may be done very early while the limb is still in splints that may not be removed, or through holes cut in a plaster, and in many cases it may be a substitute when active movement is impossible from the above causes, or from extreme weakness of the muscles.

Pain is a variable element in disability, and is probably more marked in the injuries of elderly people. Pain together with heat usually implies over-activity, demanding accordingly rest. If

modified functional use of a limb is being carried out the relief of direct weight bearing through the joints, and therefore of pain from inter-osseous pressure, may be relieved by the use of a weight-bearing appliance. Such appliances are the simple calliper splint, a modification of the Thomas's knee splint, and the more complicated Hessing apparatus. Hot bathing is serviceable, but contrast bathing is to be avoided.

Chronic swelling and œdema of the leg will necessitate the avoidance of too lengthy dependent positions. It is no good wasting time on such a limb with massage if the leg remains hanging down during the rest of the day. Support from an elastic bandage applied from the toes upwards before the patient rises in the morning will prevent much of this swelling; and wool-compression on a joint which tends to remain swollen from effusion will assist the absorption, and prevent chronic over distention of the capsule. Contrast bathing is helpful in these œdema cases. Where circulatory change is obvious from the coldness and blueness of the limb it is important to see that the part is well clad.

Guy's Hospital War Savings Association.

THE Guy's Hospital War Savings Association has been working nearly fifteen months, and, as the audit just completed shows, for the six months ending September 30th, 1917, it has 384 members, and has purchased 2,118 certificates, valued at £1,641 9s.

It will be remembered that on February 12th last, the Governors, to support the War Loan, and for the benefit of the Association, invested £1,000 in War Certificates, to be held by the Association and repurchased by the members, and, in addition, 254 certificates dated February 16th, were reserved for us by the Borough of Southwark War Savings Committee. These Certificates of early date have not been exhausted and, as already explained in the GUY'S HOSPITAL GAZETTE (10th March, 1917), a certificate predated nine months bears interest at the rate of £6 3s. 7d. per annum. These certificates have almost reached that term.

Although the membership of the Association numbers 384, comparatively few are *regular* subscribers, and it is of special value that subscriptions should as far as possible be paid weekly, or at regular stated intervals, calculated at so much a week. A constant stream of money is particularly desired, as the Chancellor of the Exchequer said at the great Albert Hall meeting on 22nd October, in speaking of the reasons for issuing War Bonds instead of raising another loan. "It would be better, it would be a sounder method, if every month and every week each individual would say: I can save so much, and I shall lend it now to the State. But this method, if it is possible, has another advantage. There is nothing spasmodic about it. It is steady and persistent, and nothing could be better as an example of what at this stage will prove a decisive factor in the war. Nothing could be better as an example of our staying power than that money should come week by week in this way." And though this was said of National War Bonds, it is also true of War Savings Certificates.

It may be of interest to quote from the last number of "War Savings," the official journal of the War Savings Committee, which has an article on National War Bonds (the campaign for which has been entrusted to the National War Savings Committee), shewing how War Savings Certificates compare with them as an investment.

"It is natural for those most intimately connected with the war savings movement to consider how these new securities compare with war savings certificates. We are in no way con-

cerned to recommend one government security in preference to another, but at the same time we may appropriately point out that war savings certificates yield interest at £5 4s. 7d. per cent. per annum, and that income tax at only 1s. in the £ would reduce the yield from the war bonds below the return that is given by war savings certificates. It is, moreover, a reasonable certainty that people buying war bonds would not invest the dividends immediately they were received, so as to obtain compound interest upon their money. Hence, considered upon their merits, apart from their suitability to the circumstances of different people, war savings certificates, with their freedom from income tax and the accumulation of their interest, remain the most attractive investment at present available.

"We should, therefore, in the interest of the country and the individual, encourage the purchase of war savings certificates to the maximum number of 500, costing £387 10s. 0d. It is to the good that all classes of investors should hold war savings certificates."

Guy's Hospital Physiological Society.

The Annual General Meeting was held on Friday, October 26th. As Dr. Pembrey was unavoidably engaged, Mr. Braithwaite was elected Chairman. The minutes of previous meetings, the Annual Report, and the Finance Report were duly read and confirmed, Messrs. Herbert and Conacaud being appointed auditors.

The following officers for the ensuing session were elected:—

President—Dr. M. S. Pembrey.

Vice-Presidents—Dr. N. Mutch, Dr. P. P. Laidlaw, Dr. E. P. Poulton, Mr. T. J. Evans, Mr. A. H. Todd, Mr. A. M. Zamora, Mr. A. R. Thompson, Mr. J. H. Ryffel.

Committee—Messrs. Lake, Herbert, Massie, Braithwaite, and S. Cohen.

Librarian—Mr. E. E. B. Gray.

Hon. Sec. and Treas—Mr. W. A. Payne.

It was decided to hold meetings fortnightly on Wednesdays at 3 p.m. A long discussion was then held on the subject of catering Owing to the difficulty in obtaining tea and sugar, doubt was expressed as to the wisdom of continuing the custom of having tea at the meetings. Various alternative beverages were suggested, from cocoa to ginger beer, but no agreement could be arrived at. The Committee was then left to draw up a workable arrangement to be subjected to the next meeting. The question of fixing the subscription was left until a decision as to catering was arrived at. Tobacco will still be supplied.

The next meeting will be held on Wednesday, November 7th, when Mr. J. V. C. Braithwaite, will read a paper on "The Scientific Aspect of Psychic Research."

W. A. P.

Appointments.

House Appointments.

November 17th—January 18th.

House Physicians.—J. R. Cox (Dr. Hale White and Dr. Shaw); J. C. Gie (Dr. Fawcett and Dr. Beddard).

House Surgeons.—C. H. Laver (Sir Arbuthnot Lane); A. Bulleid (Mr. Dunn); J. Victory (Sir Alfred Fripp); D. V. Halstead (Mr. Steward).

Out-Patient Officers.—R. C. W. Staley & F. Caldecott.

Obstetric Residents.—E. H. Bryant and G. M. M. Jabir.

Ophthalmic House Surgeon.—J. W. Woodruff.

Assistant House Physicians.—W. H. Grace, A. L. S. Payne, R. T. F. D. Roberts, W. Gover.

Assistant Casualty Officers.—L. S. Debenham and G. A. S. Shacklock.

Assistant House Surgeons.——J. T. T. Forbes and H. J. Leviseur.

R.N.M.S.

The following appointments have been made:—

Temp. Surgeon S. Worthington, M.B., D.P.H., to the *Pembroke*, additional for disposal.

Temp. Surgeon H. Parry-Price to the *Lion*.

Surgeon H. Corry Mann, M.D., R.N., to H.M.S. *Racer*, additional for R.N. College, Osborne. For special duty: To investigate matters dealing with the general health of the Cadets at the R.N. College, Isle of Wight.

R.A.M.C.

Temp. Lieuts. to be Temp. Captains.—L. W. Evans, H. S. Brown, J. Robertson, H. L. Smith.

To be Temp. Lieuts.—E. W. Goble.

Temp. Lieut. A. Reid relinquishes his commission.

Territorial Force.

H. Tipping (late Lieut. R.A.M.C.) to be Temp. Captain and Medical Officer, 1st Battalion Middlesex Volunteer Regiment.

Pass List.

Society of Apothecaries of London.

At the Examination held recently the following candidates passed in the undermentioned subjects:—

Surgery.—E. F. Deacon (Section ii.).

Medicine.—E. F. Deacon (Section ii.), A. Magill (Section i.).

Forensic Medicine.—O. Halstead.

Midwifery.—G. H. Fitzgerald, O, Halstead.

The Diploma of the Society was granted to E. F Deacon entitling him to practise in Medicine, Surgery and Midwifery.

Examining Board in England of the Royal Colleges of Physicians of London and Surgeons of England.

At the recent Examination the following Candidates were successful in the undermentioned subjects:—

FIRST EXAMINATION.

Chemistry.—J. K. Milward.

Practical Pharmacy.—G. A. A. Bradnack, J. Kendall, G. Noott, G. Meadows.

FINAL EXAMINATION.

Medicine.—G. Meadows, J. T. T. Forbes, C. W. W. Armstrong, G. B. Tarring, W. Gover, G. A. S. Shacklock, S. T. Wong, A. L. S. Payne, R. T. F. D. Roberts, A. R. Doyle, W. H. Grace, S. A. Withers.

Surgery.—*J. R. Cox, *R. C. W. Staley, *K. M. C. Woodruff, *J. C. Gie, *A. Bulleid, *J. S. Ellis, *N. A. H. Barlow, *D. V. Halstead. *N. Kamschorn.

Midwifery.—L. S. Debenham, W. H. Simmons, H, J. Leviseur, C. Gill-Carey, J. E. de Van der Merwe, H. F. G. Berncastle, A. K. Day-Lewis, *E. C. Hinde, G. H. Fitzgerald, A. A. Osman, G. M. Thomas, F. W. Reitz, E. F. Kerby.

* Have completed the Examination.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Lectures on Medicine. A handbook for Nurses. By Chalmer Watson, M.D., F.R.C.P.E. Pp. 295. Price 4/6. (Published by Messrs. L. & S. Livingstone.)

Like so many other teachers, the author believes that under present hospital conditions it is impossible for the average nurse to obtain such knowledge as will enable or encourage her to take an intelligent interest in her cases. This volume is an attempt to supply this want, and whether successful or not will depend purely upon the reader. The book deals in a general but systematic way with the disorders affecting the various systems and certainly emphasises the main points with great clearness. Here and there, however, the information imparted is somewhat questionable. On page 208, we read that sugar is to be absolutely avoided in a diabetic diet, and that the loss of calories so incurred is to be made up with an excess of fat, not protein. The rigid restriction of sugar in diabetic cases has led again and again to disastrous results, and the evidence that the abnormal acids met with arise from fat overwhelming. Again, not a mention is made of the Allen treatment. We should imagine this more essential knowledge to the modern nurse than the above antiquated and questionable treatment. On the other hand, the last fifty pages contain much valuable information concerning diets in other conditions- The book should be in the hands of unior nurses, who will find it invaluable when they desire to understand disease from the point of view that affects nursing.

Surgical After-Treatment. By Alan H. Todd, F.R.C.S. Pp. 236. Price 4/6 (Published by Edward Arnold.)

This manual, so well known at Guy's, has now reached its second edition. A much fuller account of preparation and after-treatment of Rectal cases has been given and will do much to render the duties of the house-surgeon in these cases far less troublesome. Two useful appendices have been added—one on the Thomas' Splint and one on Proprietary Drugs that have been adopted by the new British Pharmacopœia. One would have wished that the Thomas' Splint received a fuller description, for there is a sad absence of it from the wards of this hospital; this on feels is due to a lack of knowledge of its merits. There is no need to commend the book to the House Staff for its sphere of usefulness in those circles is too well known. To men about to enter the wards one can only say that if they wish to appreciate what the effects of logical dressing are they had better immediately invest in this manual, before they disappoint themselves by the standardised methods that one is too i able to adopt.

Rugby Football.

GUY'S v. A.S.C., BLACKHEATH.

The Hospital commenced Rugby football last Saturday, October 20th, with a match against the above side, drawn from the 2nd Reserve Horse Transport, stationed at Blackheath. Mr. Curle has again managed to arrange a list of matches, and all interested in Guy's Rugger are grateful to him for keeping the game alive. When the war is over it will be much easier to get Guy's going again as far as Rugby is concerned, because interest in the grand game has, thanks to the player mentioned, never been allowed to entirely lapse.

A late start, owing to train difficulties, was made, and at once Guy's got going, two scores being registered in the first few minutes. To Curle came the honour of the first try of the season; the ball was nicely worked to him. Reitz failed with the kick, but made no mistake with his place kick from a try which Dowling got almost immediately afterwards.

It is rather sad to relate that after this excellent start Guy's did not do so well. Criticisms should be very limited in a first match, when men are unfit and short of practice. But for all that the team should feed Curle; he is by far the most likely scorer. Bekker can cut out openings if he will, but he likes hugging the leather instead of cutting out an opening and passing. If no one else will cut the way out for the captain, one would be inclined to let Reitz come into the three-quarter line. The forwards tired very early, but several showed good form, and the whole side will shake down into a very useful fifteen after a few games.

The A.S.C. scored once before half-time, the result of a strong rush by the forwards. No goal resulted from the try.

During the second half the soldiers rather held us by strong forward play. Their backs failed to combine for the attack, but their tackling was quite useful. Another reason why we failed to do much was that so many passes went astray. Once Reitz cut out a grand opening for Becker who unfortunately got in front of his man for the final pass. Only once this second half did we score, Tonkin got the try by following up in some loose play. Reitz converted. We were lucky over this try or the soldiers were unlucky; which you like. One of them marked, but the referee did not give it. Most of the opponents unwisely stopped expecting the decision in their favour. In the resulting play with the A.S.C. disorganised and Tonkin got his try. Final score:—

Guy's 2 goals 1 try ...	13
A.S C. 1 try	3

GUY'S.—C. Rose (back); C. L. Curle (Captain), W. T. Flooks, G. B. Dowling, R. M. Tonkin (three-quarters); F. Bekker, C. Becker (halves); F. W. Reitz, H. O. Long, J. de V. Merwe, C. T. Barrett, D. J. O'Meara, P. J. Morrison, H. J. Leviseur, K. M. K. Duff (forwards).

FIXTURES, 1917—1918.

Below is a list of fixtures for the season:—

Sats.

Oct. 20.—No. 2 Res. Horse Transport Depôt, A.S.C., Blackheath.
„ 27.—Royal Naval College, Greenwich.
Nov. 3.—Royal Military Academy, Woolwich.
„ 10.—
„ 17.—Artists' Rifles.
„ 24.—No. 2 Horse Transport Depôt, A.S.C., Blackheath.
Dec. 1.—Dulwich College.
„ 8.—New Zealand Field Artillery, Res. Depôt, Fleet.
„ 15.—Canadian Army Pay Corps.
„ 22.—St. Bartholomew's Hospital.
Jan. 5.—Royal Naval College, Greenwich.
„ 12.—Artists' Rifles.
„ 19.—Royal Naval Depôt, Crystal Palace.
„ 26.—Royal Military Academy, Woolwich.
Feb. 2.—Canadian Army Pay Corps.
„ 9.—Public Schools Services XV.. Richmond.
. 16.—St. Bartholomew's Hospital.
„ 23.—Royal Naval Depôt, Crystal Palace.
Mar. 2.—
„ 9.—
„ 16.—No. 2 Res. Horse Transport Depôt, A.S.C., Blackheath.
„ 23.—
„ 30.—

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Deaths.

CHANING-PEARCE.—On October 1st, killed in action, Temp. Capt. Wilfrid Thomas Chaning-Pearce, M.C., R.A.M.C., M.B., B.C. Camb.

SAW.—On October 9th, killed instantly on the battlefield, Capt. Noel Humphrey Wykeham Saw, M.C., R.A.M.C. Age 25.

NICHOLSON.—On October 15th, Tom M. Nicholson, M.A., Oxon., M.R.C.S., L.R.C.P., after great suffering heroically borne.

J. J.

GUY'S HOSPITAL GAZETTE.

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Passim.

WE are glad to state that the information received by us and published in our last issue concerning the Landon Tea fund was incorrect. We insert a letter from the Treasurer of the fund, from which it will be seen that at the meeting referred to in our last number the motion for continuing the Tea was voted for unanimously. We trust that the appeal for subscriptions will be answered without delay, in order to facilitate the work of all those upon whom the success of the Tea primarily depends.

A VERY successful "going off" dinner was held in the College, on Wednesday, October 31st. In the opinion of everyone present, this dinner was the most successful that has been held for many a year. We take this opportunity of congratulating the Residents of the last three months for the very excellent arrangements they made and of expressing our appreciation of the efforts of the catering department at the College which did much to ensure the success of the dinner. Towards the end of the evening the new Residents voted for their President and Vice-President. We offer our congratulations to Mr. Gie and Mr. Victory on their being elected.

WE have been asked to point out that members of the Club are not exempted from payment when using the Grand Stand at Honor Oak Park. Will offenders kindly note and remember that the small amount of money taken at the ground each Saturday is given to various War Charities.

AT a Meeting of the General Court of Governors, held on November 2nd, the following were elected as Governors of the Corporation:—

Charles John Stewart, Esq.

General Vesey John Dawson, C.V.O.

Colonel Sir Francis Edward Younghusband, K.C.S.I., K.C.I.E., and

Robert Martin Holland, Esq., C.B.

WE are very glad to see Mr. Steward looking so well after his return from France. During his six months of absence from the Hospital Mr. Steward has been attached to the 53rd General Hospital, France, where he was so much impressed by the improvement in the treatment of Fractures, and of the possibility of applying these methods to civil practice, that he intends to give a lecture and demonstration at an early date. It is hoped that Mr. Steward's return will considerably lighten the duties of

Mr. Hughes, who during the last few months has come in for the major part of the work on the Surgical side.

THE first practice of the "niggers" was held on Monday, the 5th inst. and sweets sounds of music once again filled the College. It is hoped that all Residents and others who have been asked to join, will make a great effort to attend regularly on account of the short interval of time that separates us from Xmas. It is felt that if every member of the chorus does his best the success of "niggers" will not suffer in spite of the rather limited individual talent. It will be remembered that the "niggers" of last year were exceptionally brilliant, and it is hoped that every effort will be made to maintain the high standard of their entertainment throughout the wards of the hospital, and last but not least, in Out-patients.

OUR attention has been drawn to the following advertisement appearing in a provincial newspaper:—

> "OLIVER'S DENTAL SURGERY. . . . . Manager, E. H. Mellin (late of Guy's Hospital)," etc.

We have investigated this gentleman's connection with the hospital and find that he was a student in the Dental Department between 1899 and 1900, during which period he passed no examination whatever. It is impossible, owing to the present unsatisfactory position of the dental profession, to take any legal action against this individual. The present law relating to dental practice makes it impossible for "quacks" to sue for fees in a court of law, so that they of necessity pursue a course of "cash down." Does anyone now fail to understand the significance of "All advice free" which form the closing words of this advertisement? We do not know whether Mr. E. H. Mellin visits the Hospital, but we can assure him of a very hearty welcome the next time he does so!

THE Medical School Office has received the following amendment to Army Instruction No. 1385, issued on September 8th, 1917. Instead of reading "third year medical students now serving with the colours, who, prior to August 1st, 1914, were actively engaged in medical studies . . . are, if eligible to be transferred to Class W or Class W (T) of the Reserve . . . provided they are willing and undertake to return to their studies with a view to obtaining a medical qualification," the new Order 1585 reads: "third year medical students, who, prior to enlistment, etc." It will be seen that this amendment will increase the number of men eligible to continue their medical studies, and that the Army Medical Board has at last begun to realise the importance and difficulty of preserving the present strength of the R.A.M.C. It is hoped that all who know the address of old Guy's men serving abroad or of their Parents, will kindly communicate with the Medical School Office in order that the necessary certificates may be distributed without delay.

FOR the last two years the medical periodicals have contained letters from innumerable sources, in which complaints have been voiced concerning the amount and quality of the work experienced physicians and surgeons have been called upon to perform. The Army Medical Board has at last realised the chaotic condition of its organisation and has taken steps towards reorganisation. "Chits" have been sent to every medical officer, and amongst other things they have been asked to state the number of hours of work they perform each day. In a particular case reported to the GAZETTE

this amounted to about one half hour, but with due respect the medical officer in question filled in his "chit" with three hours work per day; unfortunately this failed to satisfy the official mind so that this "chit" was returned with the words, "Please amend, nothing below 5 hours accepted." Is the Board going to justify its organization or is it not? It would seem that even here as in so many other official departments, there is particularly keen internal dissension, and that half of those at the head of affairs are attempting to justify their existence, while the other half are actively striving to bring about a much needed reform. There can be no question that reorganisation is urgently needed. To quote but a single instance of this mismanagement. There are at present many men between 35 and 40, with several years of practice and experience, in the firing line, where some have been for over a year without being relieved. On the other hand there are newly qualified men who have been at a Base Hospital for the same length of time without having the slightest qualification to justify their absence from the front line. Many men will recall how a certain Guy's man with exceptional experience in medical cases was appointed Embarkation Officer somewhere in the East, while other men some three months after qualifying were given posts involving great responsibility, about which they confessed more or less complete ignorance.

Seabrooke Memorial Tablet.

THIS Tablet has now been fixed in Grays Church, and a memorial service will be held there on Wednesday, November 21st, at 3 p.m. A train leaves Fenchurch Street at 1.48, arriving at Grays at 2.47, and Mrs. Seabrooke has kindly extended an invitation to tea at "The Elms" to all those who would like to be present and inspect the Tablet.. The church is within two minutes' walk of Gray's Station.

Obituary.

Lieut. KENNETH GLAISBY. R.F.A.

LIEUT. KENNETH GLAISBY, R.F.A. (killed in action on November 1), was twenty-one years of age and younger son of Mr. Walter Glaisby, of 4, St. Leonards, York. Educated at Aysgarth and Uppingham, he was in the running and shooting eight at Uppingham, and shot for the School at Bisley in 1913. He received his commission in August, 1915, at the age of nineteen, after one term at Guy's Hospital as a medical student, where he passed his first professional examination. He went to the front in February of this year and was gazetted lieutenant in July. His Commanding Officers have written to his parents as follows: "May we say that, although he had only been a short time in the battery, his loss has come as a great blow to us, both for personal reasons, as he had a charming disposition, and also for military reasons, as he was a most capable officer, and willing to do more than his own share of work. We were much struck by his soldier-like qualities, keenness, and sound commonsense. We feel that we have lost a good officer, and we can ill afford to lose such." His elder brother, Flight Lieutenant Norman Glaisby, R.N., has recently received the Distinguished Service Cross for gallantry while flying over the German lines.

2nd Lieut. T. E. HENDERSON, South Staffordshire Regiment.

2ND LIEUT. HENDERSON, killed in France, was educated at University College School, from which school he matriculated with First Class Honours in June, 1893. He did not enter Guy's as a dental student until May, 1910, but from that time until qualification in May, 1913,

he endeared himself to all with whom he came in contact. He took the First Year's Dental Prize in 1911, and the Second Year's Prize in 1912. He was Assistant Demonstrator of Dental Metallurgy from May–July, 1911, and Assistant Dental House-Surgeon from January–March, 1912. After qualifying in 1913 he acted as an assistant until September, 1914, when, at the age of 38 years, he joined the Public Schools Battalion, and in July, 1915, received a commission. A year later he went to France, and in defending an advanced post at the corner of Delville Wood was reported "missing" on August 31st, 1916. The War Office now reports that evidence has been received that he was killed in that action.

2nd Lieut. H. M. SCOTT-PILLOW, Royal Flying Corps.

Mr. H. M. Scott-Pillow entered Guy's as a Dental Student in May, 1914. Shortly after the outbreak of war he joined the Public School Corps, and was later given a commission in the Middlesex Regiment from which he transferred to the Royal Flying Corps. He went to France in July of this year, and was killed in action on August 8th. The officer commanding the 7th Squadron Royal Flying Corps, to which he was attached, writes of him to his mother, "your son had shown himself a very promising and capable pilot, who always did his work well, and he had endeared himself to all with whom he came in contact."

Papers by Guy's Men.

E. H. Musgrove, L.D.S., R.C.S.: The care of baby's teeth.—*Brit. Dent. Journ.*, Nov. 1st, 1917.

E. J. Spriggs, M.B., F.R.C.P. (in collaboration with A. B. Weir, B.Sc.): The digestibility of bread made from two parts of wheat and one part oats, barley, maize, or rice.—*The Lancet*, Nov. 10th, 1917.

Guy's Hospital Physiological Society.

A meeting was held on November 7th. Dr. M. S. Pembrey occupied the chair and an unusually large number of members was present. The auditors' report was received and adopted. The Librarian published his list of members who had not returned books borrowed from the library of the Society. A vote of sympathy to Mr. and Mrs. Maxwell on the loss of their son, a past secretary of the Society, was passed unanimously.

The chairman then called upon Mr. J. V. C. Braithwaite to read a paper on "The Scientific Aspect of Psychic Phenomena." Mr. Braithwaite prefaced his paper by an appeal for a fair hearing. His subject was one on which most people were extremely biassed. They would call men more intellectual than themselves fools or charlatans rather than acknowledge powers beyond their comprehension.

The two main criticisms to be faced were fraud and suggestion. Of the former too many examples were unfortunately known, but a considerable quantity of material has been collected from quarters which even the most hardened cynic must acknowledge to be free from taint. The second point—that of suggestion—was by no means so easily dealt with, in fact, by means of hypnotism, auto-suggestion, and telepathy the vast majority of the present psychic phenomena are capable of some sort of explanation.

An account of a series of interesting experiments of Dr. Crawford, D.Sc., Lecturer of Mechanical Engineering at Belfast, were then given at length. To disprove the auto-suggestion and hypnotic theory, Dr. Crawford took a phonograph record of the noises heard at a séance. His main work was on Levitation of

Tables. His method may be more easily understood from the following experiment.

The medium, seated on a chair, was placed on a weighing machine and carefully weighed. The circle was formed with the table in the middle out of reach of anyone. The operating spirit was then requested to lift the table. This was done and the medium and chair re-weighed. The following figures were obtained :—

Weight of medium, plus chair and platform, 9st. 4lbs. 14oz.

Weight of medium, plus chair and platform during levitation of table, 10st. 0lbs. 10oz.

Increase in medium's weight due to levitation, 9lbs. 12oz.

Weight of table, 10lbs. 6oz.

Dr. Crawford performed experiments endeavouring to find how the force was transmitted. He showed that the small difference between the medium's increase in weight and the weight of the table was distributed amongst the circle, each member gaining a small amount. He obtained no result from placing a manometer between the table and floor nor by placing a delicately balanced electric contact on the floor beneath the table. A large object, however, placed high up between the table and the floor seemed to interfere with the process, and the table dropped to the ground.

A theory has been evolved that the spirits, in order to perform their various operations (necessary only to persuade a disbelieving world of their reality), remove from the medium matter in a changed form which still possesses weight and strength. With this matter they make their various noises. In the levitation experiments they make this matter into a cantilever, the medium being the fulcrum and the object being lifted with the free end. In order to check this, Dr. Crawford asked the spirits to remove as much matter from the medium on the weighing machine as they could, when the medium lost 54½lbs.

Mr. Braithwaite concluded his paper by giving a few details of some of his personal experiences.

After an interval for tea, a very lively debate ensued which ended by Mr. Leviseur informing Mr. Braithwaite that he was in danger of losing his individuality and that he was already becoming very suggestible, and that he and Mr. Gainsborough were willing to meet Mr. Braithwaite at any time and demonstrate these points to him, a challenge, which Mr. Braithwaite accepted.

The meeting closed with a hearty vote of thanks to Mr. Braithwaite for his paper and to Dr. Pembrey for occupying the chair.

The Secretary and Treasurer (Mr. W. W. Payne) desires to announce that the subscriptions (3s.) are due. All members who have already paid two subscriptions become life members on payment of 1s.

The next meeting will be held on Wednesday, November 21st, at 3.15 in Class Room 2, when Mr. M. Maisels will read a paper on "The Place of Physiology in Education."

W. W. P.

Roll of Honour.

Wounded.

Capt. F. W. Stone, R.A.M.C.
Surg.-Prob J. M. Thomson, H.M.S. *Strongbow.*
Lieut.-Col. H. Fulton, R.A.M.C.

Mentioned in Despatches.

Capt, M. A. Rahman, I.M.S.

Clinical Demonstration.

By Dr. SHAW.

Aortic Regurgitation associated with Chronic Arthritis.

A male, æt. 29, admitted into Addison on August 24th, 1917. In the merchant service. His father died of rheumatic heart disease. The patient had no illness of importance till 1913, when he had an attack of gonorrhœa. He was treated with vaccines and was injected once only with salvarsan. No symptoms suggesting syphilis followed, but for some time he suffered from a chronic gleet.

In February, 1916, he had an acute illness characterised by pain and swelling of joints of hands and knees. He was treated with salicylate of soda and made a complete recovery.

In February, 1917, he had a similar attack of sudden onset. Pains in his joints have persisted till the present time (October, 1917). Recently he has complained of precordial pain.

To-day I am able to demonstrate to you the existence of physical signs of chronic arthritis in several joints. Those of his wrist and hands are slightly enlarged and tender. There is marked wasting of the interossei muscles. The right elbow and shoulder are painful and creak on passive movement.

My wards clerks can vouch for the presence of physical signs of aortic regurgitation. There are no obvious symptoms of this condition unless we regard the complaint of occasional precordial pain as being the result of the lesion. The physical signs are quite conclusive. There is a well-marked, soft, early diastolic murmur best heard in the third left intercostal space. The pulse has a markedly splashing character. These two signs are enough in themselves to establish the existence of aortic regurgitation. But there are two other signs: one which I first heard of when I was a house-physician; the other which has been introduced to me by my ward clerks quite recently. When I was Hilton Fagge's house-physician, he, being an examiner in medicine at the University of London, came to Guy's one afternoon full of interest to discover whether what some of the candidates had been stating in their papers about a new sign of aortic regurgitation was true. The statement was that if the forehead were reddened by friction, the hyperæmic area would blush and pale alternately in synchronism with the systole and diastole respectively. We found some cases of the disease in the wards, established the existence of the sign, and I have ever since found it a useful and trustworthy aid in determining the existence of aortic regurgitation.

Recently my ward clerks and I have been investigating the trustworthiness of a more modern sign which seems likely to be almost as useful. In our present patient we discovered that the systolic blood pressure was 110 and the diastolic only 50, a difference of 60, or, as it is generally called, a pulse pressure of 60. Such a marked difference is said to be almost pathognomonic of aortic regurgitation. I wonder whether fuller observations will prove this sign to be as trustworthy as capillary pulsation has been. In making our observations we have been much impressed with the advantages of the auscultatory method of determining blood pressure, and I strongly recommend you to make use of it exclusively.

But I did not bring this case to discuss with you the diagnosis of aortic regurgitation, but the somewhat unusual concurrence of aortic regurgitation and chronic arthritis. Those of you who have been my ward clerks are familiar with my suggestion that when you find two pathological conditions in a patient you should try and make out whether one is the cause of the other, the other is the cause of the one, whether both are dependent on some common cause, or whether they are totally unrelated to each other. Applying this process to the two concurrent conditions present in this case we must at once admit that aortic regurgitation cannot be regarded as the cause of chronic arthritis, or chronic arthritis of aortic regurgitation. Is there a common cause for these two conditions? There are three events or supposed events in the patient's past history which are often followed by sequelæ. Somebody evidently thought he had syphilis, at least he was injected with salvarsan. Dr. Moxon used to tell us that each new remedy was liable to pass through four stages. At first it was good for something, then it was good for everything, then it cured sea-sickness, and then it was good for nothing. Salvarsan has hardly yet emerged from the first stage and we may therefore suppose that when it is used in a case of venereal disease there is a reasonable presumption that syphilis is suspected.

Syphilis is an extremely common cause of aortic regurgitation and it is a rarer cause of chronic arthritis. It must be remembered, however, that the atheroma resulting from syphilis generally involves first the attached base of the aortic valves and that only later on does it involves their edges. For this reason a purely diastolic aortic murmur with no suspicion of a systolic one is rare in syphilis. In rheumatic endocarditis, on the other hand, the contact edges of the valves are first involved and regurgitation without stenosis is common. Again, the concurrent atheroma of the aorta itself in syphilis is likely to raise the blood pressure, and thus, although the pulse pressure or difference between the systolic and diastolic pressure is great, as in all aortic regurgitations, in syphilitic aortic regurgitation the systolic pressure may be 170 and the diastolic 90. In this patient, as I have already said, the systolic is 110 and diastolic only 50. On the two grounds, then, that there is no evidence of stenosis and that the blood pressure is low; it is unlikely that syphilis is the cause of the heart trouble. Again, though chronic arthritis may result from syphilis, the changes are generally limited to a single large joint, whereas in our patient many joints, and some quite small ones, are affected. For what it is worth, the Wassermann test is negative. We may, therefore, conclude,I think, that syphilis is not the common cause for which we are seeking.

Is the gonorrhœa from which he undoubtedly suffered four years ago likely to be responsible for his two lesions? To take first the joint condition, it must be admitted that its special features are quite compatible with a gonococcal origin. The actual joints affected, the intractable nature of the trouble and the wasting of muscles are all features often observed in so-called gonorrhœal rheumatism. Dr. Poulton, who has shared with me the responsibility for the treatment of this case, was so impressed with the possibility of an abiding gonococcal affection that he has had a bacteriological exa-

mination made of the urine passed immediately after massage of the prostate. No positive result was obtained.

Turning now to the cardiac lesion, you are familiar with the fact that endocarditis may result from gonococcal affections. You have seen specimens in the museum of cardiac valves covered with vegetations in which gonococci have been demonstrated. But these specimens have been taken from patients suffering from a much more severe and acute infection than we have to deal with here. It is so improbable that this man's aortic regurgitation is of gonorrhœal origin that we must give up the idea that the gonococcus is the common cause we are seeking.

Now when we come to consider whether acute rheumatism is the common cause, I can imagine some of you saying, why, of course it is; why all this fuss? Is not acute rheumatism the commonest cause of aortic disease in men of 29? And are not the facts that there is no stenosis and that the blood pressure is low strong evidence that the cardiac lesion is due to rheumatic endocarditis? Quite true, but, on the other hand, I am anxious to impress upon you the fact that acute rheumatism is one of the rarest causes of chronic arthritis. It is one of the most striking features of acute rheumatism that, however fierce the local inflammation may be, the joints are subsequently entirely restored and anything like permanent deformity or impairment of function is extremely unlikely. If you have been led to make a diagnosis of acute rheumatism and the joint affection persists and ankylosis or other signs of chronic arthritis supervene, you must revise your original diagnosis. The disease is probably not caused by the specific virus of acute rheumatism at all, or if this virus is present, it is associated with some other infection. For these reasons I think we must confess that we cannot find a common cause for this man's two pathological conditions. His heart lesion is almost certainly due to acute rheumatism and his chronic joint affection is most probably the result of a mixed infection of the poison of acute rheumatism and the gonococcus. I have sometimes thought that young men who have been the subject of acute rheumatism are more liable than others to suffer from joint trouble if they acquire gonorrhœa. In this case an attack of gonorrhœa preceded the first record of acute rheumatism, but you know how often an attack of acute rheumatism in childhood is of such a mild type as to be forgotten.

Pigmentation of the Skin. ? Addison's Disease.

Margaret A., æt. 32, a needlewoman, was sent to us by Dr. Elwyn, of Blackfriars, and was admitted into Mary Ward on August 26th, 1917.

A good deal of interest has been aroused in the lay press in connection with a case recently under consideration by a military tribunal. The man produced certificates from three of the most eminent members of our profession stating that he was suffering from Addison's disease. For some reason the case was referred to the Special Medical Appeal Board on which are physicians of equal eminence to those who gave the private certificates. The Appeal Board is stated to have decided that the man had not Addison's disease. At least, so the tale runs

in the lay papers. I can quite believe the main facts to be true. In many cases I have seen I should find myself unable to certify more than there are reasons both to suspect the patient has, and to doubt whether he has, Addison's disease.

The case I show you now is one of this vague kind. She was said to have a tuberculous hip at the age of 2, and still is a little lame. Sixteen years ago she was under treatment for gastric ulcer. Six weeks before admission she came again under observation, complaining of gastric symptoms associated with loss of flesh. Her doctor, who knew her well, tells us that although he always noticed that she was of a dark complexion, he was much struck when examining her during her recent illness by the increase in her pigmented condition. On this account he suspected Addison's disease and sent her into the hospital.

Now bronzing of the skin is a fairly common accompaniment of a good many serious illnesses, but most of these have many other symptoms and physical signs beyond the bronzing which is, indeed, a late complication. In cancer (especially alimentary) tubercle, pernicious anæmia, Graves' disease, diabetes, and some forms of cirrhosis of the liver such late bronzing may be noticed. But in these cases the bronzing rarely raises the question as to whether the patient is the subject of Addison's disease. He is obviously the subject of some other disease. In Addison's disease the bronzing may be a very early manifestation and may exist for a considerable time without any other obvious change. Even when the other characteristic symptoms of Addison's disease are developing, they may be too indefinite to make the diagnosis easy. What are, then, the conditions other than Addison's disease in which bronzing may occur without other obvious indications of ill-health? The taking of arsenic over long periods may cause much pigmentation without other defined symptoms of arsenical poisoning. Malaria may give rise to bronzing which may persist long after all other symptoms of the condition have passed away. In some sensitive persons sunburn may cause a bronzing, lasting a considerable time after the exposure. Pregnancy, which for any reason is not admitted and the other characteristic symptoms of which are concealed, may often be accompanied by marked pigmentation.

If you look now at this patient you will observe that she is highly pigmented. The pigmentation is general, but there are deeper, irregular patches on the forehead. The nipples are of a dark colour, but there is no special darkness in axillæ or groins, nor is there any concentration of pigment in places where pressure might occur, such as the waist or above or below the knee. But garters and tight lacing are not so universal in women as they used to be, and we must, perhaps, not expect in future to find these pressure pigment areas so often as we used to. There are a fair number of small round, extremely dark marks or moles scattered about the body. The patient can give us no information as to how long they have existed. We have noted them and are watching to see if any new ones develop. There is no pigmentation of the mucous membrane of the mouth.

As far as the pigmentation itself is concerned it might well be produced by the adrenal in-

sufficiency, which is the essential cause of Addison's disease. It certainly is not an accompaniment of any of the serious diseases which I have already named. Nor can we elicit any facts in the past history to make us think it is due to arsenic, malaria, etc. Her doctor, who is the only person who has prescribed for her in recent years, has not given her any arsenic. She has never been out of England. She certainly is not pregnant.

We turn, then, to see whether we can discover any symptoms of Addison's disease other than pigmentation. The two most characteristic symptoms are, perhaps, vomiting and low blood pressure. There has been vomiting in this case, but it has been associated with gastric pain and general symptoms of indigestion. This is unlike the vomiting of Addison's disease, which is rather a reflex vomiting coming on irregularly, not being related to the taking of food, and not associated with other signs of dyspepsia. The blood pressure is not low, though it has been rather variable, being recorded at different times between 110 and 140. There is no marked complaint of asthenia or feelings of chilliness, common symptoms of Addison's disease and related, no doubt, to the low blood pressure.

In doubtful cases of thyroid insufficiency or myxœdema we are often able to establish our diagnosis by the administration of thyroid extract, a marked improvement in the patient's condition pointing strongly to the nature of the case. There is unfortunately no such marked improvement to be expected in Addison's disease from the administration of suprarenal extract as to enable us to make use of such a therapeutic diagnosis.

Some observers have, however, stated that it is possible to make some use of the extract as a means of diagnosis in obscure cases. They assert that if in a doubtful case the blood pressure is low, and after the administration of 2 grains of suprarenal extract three times a day for three days a definite rise of pressure is observed, a diagnosis of Addison's disease may confidently be made. The blood pressure in our case is, perhaps, not low enough to lead us to expect any striking result from such an experiment, but we propose to administer the drug in the manner indicated and watch the result.

It has also been stated that in Addison's disease there may be a marked diminution in the amount of glucose in the blood. This investigation we also propose to ask Dr. Ryffel to make for us.

Whether these more modern methods of diagnosis may be helpful to us I cannot say. But without their assistance, or even if they both prove to be negative, I am disposed to regard this case as being most likely an early case of Addison's disease, and fear that as time goes on she will develop further symptoms.

[NOTE.—No marked change in blood pressure was produced by the administration of adrenalin. Dr. Ryffel reported that the amount of glucose in the blood was not below the average found in healthy subjects.]

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the GAZETTE *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette," Guy's Hospital, London, S.E.*

An Interesting Case of Cerebral Hæmorrhage.

D. M., æt, 50, was admitted into Addison under Dr. Hale White on the morning of the 4th November suffering from hemiplegia. He was a railway carter, and his previous history showed that he had had no serious illnesses.

On the morning of admission he had gone to his work as usual and after a transient feeling of dizziness collapsed to the ground in the corner of a shed. He was conveyed to the hospital and seen about twenty minutes after his collapse. In the surgery it was noticed that he was a well-built, strong-looking man with no evidence of excessive fat. He had not lost consciousness and was able to converse and to answer questions quite intelligently. He complained of loss of power down the whole of his left side and headache upon the right side of his head, more intense nearer the frontal than the occipital region.

On examination it was seen that he had a partial facial paralysis on the left side, complete paralysis of the left arm and leg with loss of all sensation in these limbs; the knee-jerk was absent and the plantar reflex extensor. On the right side the knee-jerk was sluggish and the plantar reflex flexor.

The radial pulse was 72 per minute, the artery was just palpable, and the pulse seemed to be of high tension. Examination of the heart showed some evidence of hypertrophy of the left ventricle, but there were no adventitious sounds. The skin temperature of the left arm and leg was considerably below that of the normal side. Before leaving the Surgery the patient remarked that the headache was worse. When seen in the ward about two hours later, the condition of the patient had become rapidly worse. He was now quite unconscious, his pulse had dropped to 40 per minute, and his breathing had become stertorous. His mouth was partly open and it was noticed that the tip of his tongue was pointing to the right, that is, away from the paralysed side. According to the text-books, the deviation is towards the paralysed side. The only way this could have been explained was to assume another hæmorrhage into the floor of the fourth ventricle on left side. At the autopsy this was not found.

Dr. Poulton saw the patient and confirmed the diagnosis of hæmiplegia due to cerebral hæmorrhage, and said the outlook was hopeless. The plantar reflex on the right side was now extensor, the knee-jerk on that side a little brisker than on admission, and it was also noticed that the patient was now incontinent of both urine and fæces; his pupils, hitherto of normal size, were now strongly constricted.

The patient's condition became gradually worse, his pulse dropped to 32 per minute, and his stertorous breathing became Cheyne-Stokes in character. There was no further change in his condition and he died quietly fourteen hours after admission. His temperature was subnormal during the whole of his stay in the ward.

At the autopsy on the following day Dr. Laidlaw found submucous hæmorrhages in the larynx, trachea, and bronchi, some congestion and œdema of the bases of the lungs, a greatly hypertrophied left ventricle, extensive atheroma of the arteries, marked in the coronary, internal carotid, vertebral and middle cerebral arteries: an extensive hæmorrhage on the right side of the brain destroying nearly all the corona radiata, the internal capsule and the basal nuclei, extending into the lateral ventricle of that side and also to a slight extent into the lateral ventricle of the opposite side. Some

blood had tracked through the iter and distended the fourth ventricle. The pericardium was distended with a large amount of blood and clot, the age of which was considered to be equal to that found in the cerebral ventricle. On removal of the heart some was lost, but 5 ounces or more still remained. The root of the great vessels was obscured by an enormous effusion of blood into the adventitia. The effused blood had dissected along the aorta and had burrowed among the muscle fibres. Two small hæmorrhages were visible in the endocardium, one on the wall of the right auricle and the other on the wall of the right ventricle near its junction with the septum and high up near the auriculo-ventricular ring. It was found that the blood clot in the tissues round the root of the great vessels and that in the muscle of the heart were continuous with the interventricular blood through a small hole in the wall of the ventricle. The valves were healthy.

The right coronary artery was atheromatous, tortuous, and dilated in places. At one point, two and a half inches from its mouth, there was an atheromatous ulcer, with some dilatation and aneurysm formation, the walls being covered with clot. At other places and in corresponding vessels on the other side there were numerous small patches of atheroma. The wall of the left ventricle showed a little fibrosis.

The ascending aorta was atheromatous. Just at the arch and past the exit of the head vessels there was a small saccular aneurysm one and a half inches across and filled with laminated clot. This was entirely separate from the dissecting aneurysm or effusion of blood previously described. Around the mouth of the aneurysm the aorta was fibrous and puckered, suggesting syphilitic aortitis, but this was so local that it is doubtful whether the lesion was genuinely syphilitic, as, apart from a few pigmented scars on the legs, there were no other signs of syphilis.

The kidneys were slightly fibrous; the capsules stripped fairly well. On the surface there were numerous small areas of fibrosis due to arterio-sclerosis. The testes were normal in shape and size and the tubules were easily pulled out.

In conclusion, I wish to thank Dr. Poulton for his permission to publish this case, and also Dr. Laidlaw for his help in preparing these notes. W. H. Grace.

Appointments.

The following appointments have been made :—

R.N.M.S.

Surgeons W. P. Vicary to the *Vivid*, H. F, Percival to the *Africa*, E. P. L. Hughes to the *Crescent*.

To be Temp. Surg.—N. A. H. Barlow.

A.M.S.

Lieut.-Col. H. Davy, C.B., R.A.M.C. (T.F.) to be Temp. Colonel.

R.A.M.C.

Temp. Lieuts. to be Temp. Capts.—R. C. H. Francis, A. H. Saward, H. Walker, V. T. P. Webster, F. J. Cutler, A. J. Piggot.

Temp. Hon. Lieut. E. S. Phillips (from R.A.M.C.) to be Lieutenant.

Territorial Force.

Capt. G. L. L. Lawson to be Temp. Major whilst in command of a Field Ambulance.

Territorial Force Reserve.

Capt. (Temp. Major) W. Tyson, from R.A.M.C., to be Captain.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

The Landon Out-Patients' Tea.

SIR,—For some weeks the familiar formula has been heard in the Borough, "Please will you put down my name for the Christmas Tree?" A preliminary meeting of the Landon Tea Fund Committee has been held, and it was unanimously decided not to fail such trusting and expectant spirits but to carry on as can best be arranged under war restrictions.

If tea and mufflers, sugar and stockings are not possible, the trees and a toy for each child are. The menu will be adapted to obtainable supplies, an entertainment will be provided, and above all the "Niggers" may rest assured that the longer the time they can spare for Out-Patients the happier they will make their admiring and enthusiastic audience of 700 ticket-holders, and a by no means inconsiderable "free list." All friends will be welcome as helpers in Out-Patients on Christmas afternoon, and donations and subscriptions and gifts of any kind will be gratefully received and acknowledged by Sister Out-Patients, at the Hospital, or by—Yours faithfully,

F. A. SHELDON,
Treasurer Landon Tea Fund.

Guy's Trained Nurses' Institution,
14, St. Thomas's Street,
London, S.E. 1.
30th October, 1917.

Change of Address.

Lieut.-Col. F. J. Steward, R.A.M.C. (T.), from 53rd General Hospital, France, to 98, Portland Place, W.

Capt. R. Curle, R.A.M.C., Officers' Mess, 2nd Southern General Hospital, Bristol.

Lieut. F. J. Cutler, R.A.M.C, No. 2 Rest Camp, Havre, B.E.F., France.

Lieut. F. L. Thomas, R.A,M.C., 21st Indian General Hospital, Amara, Mesopotamia.

Capt. Richard Felton, R.A.M.C., from M.O., 17th Middlesex, B.E.F., to 40th Stationary Hospital, B.E.F., France.

D. H. Wallis, L.D.S., R.C.S., from 4, Castle Street, to 89, West Street, Farnham, Surrey.

Edward H. Greaves, from The College, Tirril, Penrith, to Court Lodge, Merstham.

J. Cooper N. Wilkinson, M.R.C.S., L.R.C.P., Erskine House, Erskine Hill, N.W. 4.

Capt. J. W. Doherty, Hut 9, Camp 3A, Durrington, Salisbury Plain.

Capt. J. H. Jones, R.A.M.C., 90, Earlham Road, Norwich.

Capt. Harold Chapple, No. 5 C.C.S., B.E.F., France.

Letters from Old Guy's Men on Active Service.

15th C.C.S.,
Adv. Base,
Aug. 26th, 1917.

MY DEAR L——, I am writing to you again, not because I have been inundated with letters from you or have received any, but because of the old days . . . Oh! I believe I did get a note from you, but cannot remember. I think I last wrote from Basrah, from the curious res camp there, composed of huts of palm matting on poles. Heckels and I were the first instalment of our now scattered party of six Guy's men We arrived towards the end of June in a certain amount of dust; we were just sitting down to mess when we met Moore, Bevan Brown and Percy. We met Stallman next day. We spent three days at Basrah, and got thoroughly bitten by sandflies, I for one having a mosquito net, which only helped the sandflies, as they got blown in and failed to get blown out again. I had at one time, on the paddle steamer going up the river, over fifty bites on the back of one hand, excluding the fingers; my face, wrist and feet were the same. I must be very succulent. The result was that I developed sandfly fever on the boat, and was nearly put off at Amara, but recovered in time. The river was already falling, and our old boat with its two barges grunted, clanked, hooted and hissed its way up to the rest camp at Baghdad in ten days, after getting stuck frequently in the narrows and sometimes elsewhere, and often ramming the side with some violence. We eventually had to drop our barge.

The day after I arrived here I was posted to this, the 15th combined C.C.S., about two miles below Baghdad, on the right bank. Here I ran into a very nice mess as regards the food, but more especially the people. I met Jepson, of Guy's, but he has since gone home. This is a very pleasant spot in the middle of a partly cleared strip of date palms along the bank, at a depth of about a quarter of a mile. It is a question how much to clear the place. It is fearfully stuffy at nights when uncleared, and very hot and dusty by day if cleared entirely; we have half cleared our place. Ours is one of the best equipped C.C.S. out here; officers prefer our wards to those of the stationary hospitals, but we have no houses. There are about eighty E.P. huts arranged for the most part in rows, about five side by side, with the sides up to make a decent ward. The British wards have punkahs and sandfly nets. The theatre is all lined with sheets and is really quite nice. The patients, especially the British, can get all the smokes they want, old papers and plenty of fresh fish, fruit, etc.

The officers' mess is a dug out, with the floor about five feet below the ground, and a roof of mud about three feet above ground. It is about seven yards by six, and has ventilating shafts and an excellent punkah. It

remains about ten degrees cooler than outside when there is a wind and about sixteen when there is not; it is well furnished and very comfortable. We have others into which we retire with books from about 2 till 4 p.m.; they are not as cool and have no punkah, but are better than a tent. At night we sleep outside on hospital beds with hospital pillows, and are generally very comfortable, but occasionally a hot wind, 103° F., blows most of the night, jerking your net about and making you very thirsty. Sometimes there is too little breeze and always a good deal of noise from jackals, dogs, Arabs and others singing, steamers, patients coughing, etc.

The work consists in seeing about 80 to 100 new patients a day, of which I have about 25. I have an excellent sub-assistant surgeon, who massages them all splendidly, has quite a passable idea of medicine and interprets well. With the exception of a little microscope work and a few operations, we generally finish work by 12 or 12.30—we are the only C.C.S. that has a microscope.

As regards amusement, we have always the weather to study. It has been hot since about the end of June, just after I came here. The temperature suddenly went up from about 104° F. in the shade to 110°, 114°, 122°, 123½°, 122°, on successive days, and then stayed at 118° or 116° for some time. Then it went down to below 110° several times (these are all maximums for the days) and about twice has not gone above 106°. Just lately it has been 120° and 122° again, but now seems to be really cooling off at about 112°. During June and early July the "chemal" blew, but since then there has been practically no wind. Luckily the ice supply is generally ample for drinks and heat strokes, and the heat, excepting a few days and nights, is dry and not as bad as might be expected. Basrah is very much worse with sometimes a wet bulb of 90 or over. We have some books and a gramophone, but the thing which I at present live for is polo. There are about seven chuckers every other day in the cool of the evening, 106° or so at 6 when we begin and about 90° when we finish at 7.30. As I can find four ponies, I get a good deal; it is king among games. The mosquitos are not nearly as bad as I anticipated; at one time when the flood from the Euphrates, which was prevented from overrunning us by the road and Fehijad railway bank about two miles from here, was drying up, they were fairly bad. I don't know if that could have been the reason, but since then they have been less again. The dust and glare up here is far less than I expected, but they are much worse down at Thesiad; the glare at Malta seemed worse to me and the yellow stone everywhere very dazzling.

Baghdad is a poor place; apart from the bazaars and a few mosques there is nothing but ugly yellow brick houses, with one redeeming feature—the doors. These are of a pleasant brown wood generally with points arched and with some carved pattern and bolts and nice brass knockers. The streets are small and sweltering, and the people dirty and except the Kurds, ugly; the legs of the Kurdive portion and boatmen are magnificent. I have only been up there about three times. It is just what you would expect; round about Baghdad is flat grey earth only supporting sparse camel thorn and some liquorice roots, intersected by a couple of railways, a few roads, and innumerable little ridges which result from old gardening arrangements. Huge droves of camels, donkeys, sheep and goats go to and from Baghdad making enormous clouds of dust.

Teddy Micklem has been near by at 112 F.A., but has now gone up to Beled, a bad spot, I am told, and we are told we shall probably be moving soon. Campbell, Chapman and Purkiss have gone up to Bokaiba and that seems our most likely destination. Heckels is at a S.H. at Basrah; Gathergood is at Kut or Amara.

Well, forgive this unending scrawl.

Yours ad lib,

R. R. TRAILL.

Reviews, etc.

Midwifery, by Ten Teachers. Edited by Comyns Berkely, H. Russel Andrews, and T. S. Fairbairn. Pages 736. Price 18s. Published by Edward Arnold.

It is with great hesitation that one attempts to criticise this manual, the function and range of which is perhaps best indicated by the following extract from the preface. "This book is frankly written for students preparing for their final examination, and in the hope that it will prove useful to them afterwards, and to others who have passed beyond the stage of examinations," and again, "The writers have certain qualifications for producing a text book of midwifery for students. They are all teachers in London Medical Schools, and most of them have had experience as Examiners." Looking through the names of the authors one is struck by the number of them that have either written text books of their own on midwifery or allied subjects, and perhaps one may go further and state with more than a grain of truth that the number of Obstetricians and Gynæcologists who have not burst into print is remarkably few. While it is the boast of this department of medicine that it has progressed more than any other during the last twenty-five years, the present rate of progress can scarcely be held to justify the large number of text books that appear from time to time.

The book is divided into five chapters, and with the exception of the first they are excellent. The account of the early development of the embryo is bad, and in part quite difficult to understand; perhaps this is to be expected as this part of the subject belongs more to the province of the embryologist, and we note that of the ten authors all are practical Obstetricians with little time for matters of theoretical import. On the other hand a more or less connected account on this part of the subject is usual in the text books.

"Eden" has for so long been the standard text book at this School, that it is difficult to avoid a comparison. It may be said at once that whereas the

former is to be commended for the sound theoretical teaching that it gives, the latter excels in the advice it gives under the circumstances that occur more frequently in practice.

The book is well illustrated, and nearly all the illustrations are original; this is a very refreshing feature for the tendency of reproducing old and often obsolete diagrams in the present text book is far too common.

There is here and there a tendency to slur over difficulties that are certainly very real. On page 196, in discussing the differential diagnosis between previous nephritis and eclampsia we are told that in the former a history of scarlet fever and diphtheria is a great assistance, as well as a large volume of dilute urine with a trace of albumen during pregnancy, The present evidence that chronic parenchyomatous nephritis exists as an entity apart from chronic interstitial nephritis may be incomplete, but it is certain that clinically the urine of a case with the history indicated above is rather one with a high specific gravity, and a rather high Esbach reading.

Among the list of authors one notes the name of Mr. Chapple—this is sufficient proof that the teaching of this book does not differ in any way from that at this hospital. We recommend this book to men who have not yet invested in a text book on midwifery and to those who are about to take their final examination, for there can be no doubt that from this point of view the matter is set out in a most assimilable form.

Tropical Diseases: A Manual of the Diseases of Warm Climates. By Sir Patrick Manson, G.C.M.G., F.R.S., M.D., LL.D. Aberd. (6th Edition), Cassell & Co., Ltd. Price 15s.

The new edition of Manson's Tropical Diseases undoubtedly fills a long needed want in the library of the Medical Practitioner in Warm Climates. While this text book has always been looked upon as the standard work on this subject, Tropical Medicine has made such enormous strides in the last few years, that the previous editions did not give a correct indication of our present knowledge of such subjects as Sleeping Sickness, Blackwater Fever, and Leprosy, to name bnt one or two of the many diseases so ably described and fully detailed in the present edition. The value of the sections on Medical Entomology is enormously increased by the well-known work of Colonel Alcock, I.M.S., while the name of Dr. Sambon—always associated with Pellagra, which disease he has made his special study—is mentioned by Sir Patrick, for his assistance in the latter subject.

The original work is too well known to need remark, and any criticism of so great an authority as Sir Patrick Manson, is like questioning the virtue of Cæsar's wife, but it is of interest to note that, on the subject of Sleeping Sickness, Sir Patrick states that race has no influence on the susceptibility to trypanosoma infection. Possibly this statement is hardly in accord with the views of many observers who consider that the white races have a higher resistance to infection than the black, irrespective of the question of clothing and exposure to the bites of the Glossinæ, and that the lowered vitality of the former due to malaria and other causes, may be an important factor in their falling victims to a disease to which they might otherwise remain more or less immune.

Again, on the subject Malta Fever, one notices that no record is made of the discovery of this infection in Uganda by Bruce and Hodges in 1909, where it was found to have existed for many years and to be well known to the natives under the local name of "Muhinu." Many Guy's men will probably be surprised however that Dr. Eyre is not given the credit for his work on the subject of Malta Fever. The name of H. A. C. Gray, R.A.M.C., who receives from Sir Patrick, well deserved mention for his work on Glossina Palpalis and Trypanosoma infection will be of interest to many old Guy's men.

In conclusion, the new edition is supplied with a number of excellent plates and illustrations, and is not only a work of profound knowledge on this particular subject, but will prove of absorbing interest to medical men at home, as well as standing out as the standard text book for those who propose to practise abroad. C.H.M.

Pass List.

Examining Board in England of the Royal Colleges of Physicians of London and Surgeons of England.

At the Final Examination held October 9th to 24th, the following candidates were successful in the subjects indicated:—

Medicine.—C. W. W. Armstrong, A. R. Doyle, J. T. T. Forbes, W. Gover, W. H. Grace, G. Meadows, A. L. S. Payne, R. T. F. D. Roberts, G. A. S. Shacklock, G. B. Tarring, S. A. Withers, S. T. Wong.

Midwifery.—H. F. G. Berncastle, L. S. Debenham, G. H. Fitzgerald, C. Gill-Carey, E. F. Kerby, H. L. Leviseur, A. K, D. Lewis, A. A. Osman, F. W. Reitz, W. H. Simmons, G. McK. Thomas, J. S. de V. Van der Merwe.

Royal College of Surgeons of England.

First Professional (L.D.S. Eng.) Examination.

At the Examination held recently the following Candidates passed in the undermentioned subjects:—

Mechanical Dentistry.—C. C. de A. Birch, J. Bitar, S. H. Coplans, D. K. Gaskill, J. W. Greenwall, D. C. van der Spuy.

Dental Metallurgy.—C. C. de A. Birch, S. H. Coplans, J. W. Greenwall, D. C. van der Spuy.

L.D.S.

Final Examination.

Part I.—A. H. Goudge, W. D. Hatton, W. H. Turner, E. F. Shaw, R. S. Roche, J. M. Thomson, S. C. Turner.

**Part II.*—E. F. Shaw, K. C. Brough, M. B. Burton, P. J. S. de Wet, H. Fox, P. E. Grobbilaar, J. C. Johnson, N. L. Jones, F. R. Knowler, H. M. Marshall, H. Millett, E. A. Parker, G. Wilshire.

* Have completed the Examination.

Royal College of Physicians of Edinburgh, Royal College of Surgeons of Edinburgh, and Royal Faculty of Physicians and Surgeons of Glasgow.

FINAL EXAMINATION.

At the last Examination R. Quesada was successful.

Rugby Football.

GUY'S v. 1st RESERVE BATTN. H.A.C.

The ground was soft for this match at Honor Oak Park on Saturday, November 10th, which possibly accounts for the slow pace at which the game was played. The team might well take a leaf from the display of the R.M.A. against us the previous Saturday, aud put more "ginger" into the game.

The opposition were not very strong, due to the fact that this was the first game they had so far played. One or two are old opponents of ours. MacGowan of the London Irish, and Foster have met us before. The team, therefore, did not present very strong opposition which perhaps may account for our not appearing to go "all out."

Curle was still away, also Tonkin and Dowling, both damaged at Woolwich the previous Saturday; much rearranging was therefore necessary. Eventually Aspinwall and Duff took the outside positions with Thomas and Flooks in the centre. Thomas played a very different game to the display he gave against the Academy the previous Saturday. Threequarters being his proper place may account for it. The way he accepted from Bekker on Saturday and ran straight for the line was refreshing. Through some good passing the ball was worked out to Aspinwall who scored both the two first tries. Morrison took the place kicks but failed with both.

Ends were changed. Rose had had very little to do, for the rest of the game he had less, the soldiers seldom got over half-way, but one must say their tackling improved wonderfully as the game proceeded. MacGowan was at full back and he accounted for both Bekker and Flooks when tries looked certain. At length the forwards went over together and the scorer was apparently Reitz, Morrison converted.

Two or three good attempts were made on our left, and after much pressing Aspinwall successfully crossed the line. From now to the end the soldiers defended, their forwards could not get away with it. They tried and kept at it till the very end, but no success came their way. Two more tries were gained by Guy's, Duff the first and Reitz after; Duff's try was a good one. Just before he had been almost over, and a clever pass of his when tackled had sent Thomas away, but the pass was forward. Reitz gained his try behind the posts. Morrison failed with the kick on both occasions. Final score: Guy's, 1 goal 5 tries, 20 points. H.A.C., nil.

TEAM.—S. Ross, K. M. K. Duff, G. McK. Thomas, W. T. Flooks, G. R. Aspinwall, F. Bekker. E. C. Becker, F. W. Reitz, H. O. Long, S. I. Barrett, D. J. Morrison, J. Van der Merwe, D. J. O'Meara, H. J. Leviseur, F. Caldecott.

GUY'S v. R.M.A. WOOLWICH.

One does not want to make excuses for defeat, but in these strenuous days when men find it difficult to play at all, much more to train, there is at once good reason to understand why we came down so heavily at Woolwich on Saturday, November 3rd. Reitz, Curle and Bekker, were away, so that our strength was seriously weakened.

The opposition were in fine fettle, fit and very fast, and on the ball the whole time, they fairly ran us off our legs. Moreover, for all the second half, they were one short, and played the old game of three three-quarters. Bekker at half was much missed, their fly half left Thomas standing time after time, and in the first portion of the game during which we looked like making a fight of it, the Academy scored one goal and two tries. Crook, Davis and Sheriff, were the scorers, and Sheriff kicked the goal. This last-named player, an old Sedburgh boy, played finely throughout.

In the second half Sheriff got two more tries both by good play, and he also kicked the penalty goal and converted another try. The other tries were got by Crook (2), De Pury, Sanger, Hume, one each. Crook comes from Eastbourne, and played scrum half. Davis, of Bedford, stood off to him, and this pair opened up the game very cleverly. The Guy's tackling was very poor. Rose performed manfully, but none of the men in front of him aided in defence. They let their opponents through repeatedly, and only Rose's grit saved us from a higher number of points being registered against us. Aspinwall did all he could, but the other forwards played like tired men, with the exception of Van der Merwe. Final score: R.M.A., 3 goals, 1 penalty, 7 tries—39. Guy's, nil.

GUY'S:—S. Rose, W. K. MacKay, G. B. Dowling, W. T. Flooks, B. M. Tonkin, G. McK. Thomas, E. C. Becker, H. O. Long, G. R. Aspinwall, J. Van der Merwe, D. J. O'Meara, F. Caldecott, E. G. Foulston, H. J. Leviseur, A. R. Doyle.

Birth.

VENABLES.—On October 29th, at Queen's Cottage, Swanage, to Helen and John F. Venables, Capt. R.A.M.C., a son.

Marriage.

MANDEL—BRAMAH.—On October 30th, in Edinburgh, Leopold Mandel, M.D., Surgeon R.N., eldest son of Mr. and Mrs. Joseph Mandel, of Wellington, New Zealand, to Gertrude Winifred, third daughter of Mr. and Mrs. Bramah, of Ferry Road, Edinburgh.

Death.

BROOKHOUSE.—On October 19th, at Hill Crest, Lincoln, Charles Scott Brookhouse, L.D.S.

J. J.

GUY'S HOSPITAL GAZETTE.

VOL. XXXI., No. 767.] DECEMBER 1, 1917. [SIXPENCE.

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Passim.

ELABORATE efforts have been made to render the statue to Thomas Guy secure from air raids and we hope they will prove successful. We believe that no similar precautions have been taken with any other statue in London, and wonder whether this act on the part of the Governors is a result of the recent damage sustained by Cleopatras Needle during a raid. There can be no denying that during the recent raids the escape of the Hospital has been well nigh miraculous; we have, however, no guarantee concerning the length of this immunity, and shudder to think what would happen were the Surgical block struck by a bomb of any magnitude. The spontaneous falling of the balcony connected with Astley Cooper several weeks ago is sufficient evidence that something should be done. It must be remembered that the floors of the Wards on the Patience and Samaritan side are easily penetrable, so that in the event of the roof being struck by a bomb the lower wards would receive no advantage; on the other hand the Theatre floors are composed of concrete, and the patients in the underlying wards would probably stand a considerable chance of escaping injury. It has been suggested that Patience and Samaritan be closed as a ward and filled with sand bags; in the opinion of a gentleman well versed in these matters, the same purpose would be served by merely covering the roof with a sufficient depth of sand bags. However plausible these considerations may appear from the theoretical side, we are assured that the expense incurred in carrying out either of these schemes would be so enormous as to render their undertaking impossible. May Providence be as kind to us in the Future as it has been in the Past.

IT must have been obvious to all who visit the Dressers' Room that, owing to the present price of food and the fact that this advance is likely to be progressive, the expense incurred by the present Dressers is considerable, and that in the near future comparatively few men will be able to continue the duties of Take-in Dresser without a feeling of financial anxiety. We would like to suggest that a box be placed in the Dressers' Room and that men who drop in casually for some supper or tea be asked to contribute a small sum towards the expenditure of that particular week. It is felt that if this be carried out quite informally the number of men frequenting the Dressers' Room will not decrease, while the individual dressers would not incur so heavy an expense. We would like to bestow a word of praise on recent

dressers and ward clerks for the manner in which they have upheld the hospitality and traditions of the Dressers' Room under most trying conditions.

The attempt to restart the Physical Society has met with little response from the men in the wards. We publish a letter from "An Old President" of the Society, in which the advantages of the Society are pointed out. It is hoped that the Assistant House Physicians will do their best in endeavouring to find out what the feeling of the men in the wards is on this subject. We have sought the opinion of the Staffs of the Hospital and the Medical School, and in both cases the opinion expressed was decidedly in favour of restarting the Society, one member going so far as to lament the fact that the Society had been allowed to stop its meetings at all. There is the difficulty, however, that men stay with us for so short a time at present that it would be difficult to elect a representative body to control the interests of the Society for the period of a year. According to the rules of the Society two secretaries are to be appointed from the Junior Staff, and to their hands the major affairs of the Society are entrusted. Both the Medical and Surgical Registrars, as well as Dr. Laidlaw and Dr. Ryffel, have expressed themselves willing to officiate in this capacity, and if arrangements were made to appoint the necessary Presidents as the occasion arose—that is to say, at the end of every three months, we can see no reason why the Society should not be kept going automatically. The Society is the oldest medical society in London, and is so proud of its tradition that a change in its constitution to meet present difficulties is not to be hoped for.

We do not know whether Residents at the College are in the habit of looking at the Pavy Gymnasium while waiting for their bath. If so, they cannot have failed to notice the shameful manner in which this gift of the late Sir William Pavy has been allowed to disintegrate and assume its present delapidated condition. It may not be common knowledge, but the yearly income derived from the sum left by Sir William Pavy towards the maintenance of the Gymnasium amounts to some £60; we wonder why with this income the present state of things has been allowed to occur, and hope that the Committee appointed to look after the Gymnasium will take early steps towards its restoration. With the already increased number of first and second year's men, and the most favourable prospect that this number will soon be considerably augmented by officers and men released from their units, the Committee may rest assured that the Gymnasium so restored will serve the functions intended by its founder.

At a meeting of the Students' Club held on November 20th the Balance Sheet for the past year was read and confirmed. A motion calling for a reduction in the number of periodicals bought by the Club was also carried. The reduction amounts to one-third and affects the weekly periodicals as well as the daily newspapers, which are to be so chosen that every political opinion of the day is represented by at least a single copy.

Considerable resentment has been felt by many of the junior men because they have been unable to use the nurses' bath during the last few weeks. We should like to point out that this bath is the special property of the nurses, and is in no way connected with the Medical School, and that men are allowed its use only through the kindness of the Matron and others. The bath has been used of late as a dining-room, owing to the alterations that

are being made in the Nurses' Home, but we have little doubt that directly these are completed the same privileges as existed formerly will be granted to men desirous of using the bath.

To House Surgeons, Dressers and Ward Clerks who have had anything to do in Lazarus during the last eighteen months, the news that Sister Lazarus is leaving the Hospital will come as an unwelcome surprise. We understand that Sister Lazarus is to take up Private Nursing, in which capacity we wish her the very best of luck. Sister Pat. and Sam., who has now recovered from her recent indisposition, is to take charge of Lazarus, and we hope that the change in the type of case will not prove too sudden.

Mr. C. H. Fagge, who was invalided back from France some six weeks ago, has now completely recovered, and made an unexpected return to the Hospital on last Saturday afternoon—the occasion being a "take-in" case. It was our pleasant duty to announce the return of Mr. Steward in our last issue. Both these members of the Staff are to remain with us, and it seems that those in authority have at last realised the difficulty that the Hospital has in fulfilling its duties when so completely depleted of its working staff.

It is with deep regret that we have to announce the death of Mr. C. H. Wells which occurred on 22nd November, 1917. Mr. C. H. Wells entered the service of the Hospital in 1880, as Clerk to the Medical School, and retired in November, 1915, as Secretary to the Treasurer and Clerk to the Governors, on which occasion we published an account of his activities in connection with the Hospital. An obituary notice will appear in our next issue.

Appointments.

R.N.M.S.

Staff Surgeon H. Cooper to the *Vivid*, additional for disposal.

Temp. Surgeon E. F. Deacon to Chatham Hospital.

R.A.M.C.

Temp. Capt. G. Schofield to be Temp. Major.

Temp. Lieuts. to be Temp. Capts.—R. Franklin, L. Pern, R. Curle, H. R. Grellet.

To be Temp. Lieuts.—E. A. Miller, H. Tipping.

Officers relinquishing their Commissions.—Temp. Lieut.-Col. E. H. Starling.

Territorial Force.

Capt. M. H. Way is restored to the establishment.

Major H. P. Berry (R.A.M.C., T.F. Reserve) to be Temp. Major, Lincolnshire Medical Volunteer Corps.

Surg. Lieut.-Col. Evan Evans, late Welsh Regiment, to be Temp. Captain and Medical Officer, 1st Battalion Carmarthenshire Volunteer Regiment.

Capt. W. B. Secretan is seconded for duty with a War Hospital.

I.M.S.

Capt. C. H. Reinhold to be Major.

Civil.

A. R. Wilson, M.D. Oxon., has been appointed District Medical Officer of the Blandford Union.

Roll of Honour.

Killed in Action.

Lieut. K. Glaisby.

Wounded.

Lieut.-Col. H. Fulton, R.A.M.C.

Capt. J. A. C. Greene, M.C., R.A.M.C., att. West Yorks Regiment.

Capt. H. G. Rice, R.A.M.C., att. Durham Light Infantry.

Capt. G. D. Eccles, R.A.M.C.

Capt. J. Young, att. Durham Light Infantry.

Pte. C. F. Hawkins, Artists' Rifles.

Enuresis and other Common Disorders of Conduct in Childhood.*

BY DR. H. C. CAMERON.

BETWEEN the child and the adult neuropath there is a certain resemblance. Some disorders of conduct are so common in childhood that they excite comparatively little attention. They are looked upon merely as childish, *i.e.*, as characteristic of the state itself. Uncontrollable fits of temper or of weeping, phobias of all sorts, negativism, loss of appetite which may result in a veritable anorexia nervosa, pica nervous vomiting, insomnia, night terrors, enuresis, stereotyped movements and habit spasms, for example, are common symptoms in children when their home environment is not well adapted to their needs. Only rarely do such disorders persist into adult life. When they do, the sufferer is said to be a neuropath. I recently had a patient, a man of about 50 years of age, suffering from nervous exhaustion, who had never been able to go down stairs without holding on to the stair rail and without being posseessed by a very genuine fear of falling. The phobia was attributed to a fall down stairs in early childhood. But all children fall down stairs and are none the worse. The factor which produced the phobia, I have no doubt, was the visible alarm and distress of the parents and nurse and the persistent and repeated warnings and precautions which thereafter became habitual. The child is not of himself afraid to fall. It is the parents who make him timid and emotional by treating the fall as a disaster. A nurse who is afraid of cows may communicate that fear to the children in her charge so that it may persist for years or even for life.

Among the children of the well-to-do it is seldom that their physical needs are seriously neglected. Mothers and nurses know all about the need for fresh air, and regular meals, and a sufficiency of sleep and exercise. Nevertheless, the hygiene of the mind is often completely overlooked. The child, who is the sole pre-occupation of his parents and of his nurse, is apt to grow up in an atmosphere of fuss and worry and of excessive solicitude, which undermines his vitality both morally and physically.

The manufacture of neuropathy is proceeding unchecked in a great many nurseries at the present day. No doubt hereditary factors play a part, but it is certain that it is just among those children who inherit a sensitive and unstable nervous system that faults of management most readily produce disturbance, and correction of these faults the most gratifying improvement.

Perhaps the most striking quality of the child, and especially of the nervous child, is his extreme susceptibility to suggestion. He has no knowledge of his own individuality apart from ideas derived from those around him. Turn where you will, you will find the child shaping his conduct and behaving in accordance with suggestions which he has received from nurse and mother. No one who is unable to utilise all this suggestive force for good and not for evil can produce good results in the nursery. Where children are left pretty much to themselves—in large families and among the poor, for examples—few of the disorders we have to consider arise. Placid, comfortable people who do not worry about their children find their children, for the most part, fearless, reasonable, and normal in their behaviour. An atmosphere of apprehension and unrest in the household rapidly communicates itself to the child. That which is feared for him and thought of him—that he rapidly becomes. If he is given the reputation of eating

* These notes are the substance of a Clinical Lecture which unavoidable circumstances prevented my delivering on Nov. 23rd, 1917.—H. C. C.

well and sleeping well, of having a regular action of the bowels, of making no fuss when he falls, of not being afraid of the dark or of animals, and so forth, it will not occur to him to question that these things are characteristic of him. If every day we make the opposite suggestion to him, whether by the subtle communication of our own worries and apprehensions or openly by what we say of him in his hearing, then with equal facility he acts in accordance with these ideas derived from us. He has no acquired experience to guide him and no faculty, therefore, of self appreciation or of self criticism. Almost entirely his conduct is governed by the direct or indirect suggestions of those around him.

Refusal of Food.

Take, as a first example, the matter of his likes and dislikes for food.

When a child begins to enlarge his dietary and to encounter for the first time a variety of flavours, he may be seen to start and waver at each new sensation. With nervous children this hesitation may be prolonged and pronounced. The attitude of the nurse at this stage is all-important. Nothing should be done to concentrate attention on the difficulty. If he is appealed to and urged too much, if his suspicions are aroused by praising excessively the delicious flavour of the food, or if an attempt is made to force him to swallow, then a strong impression may be made upon his mind which may recur the next time he encounters the same article. If it then becomes a fixed belief in the mind of the nurse that there exists an antipathy to this particular food, her manner in offering it will be apt to be such as to add to the force of the suggestion. Still worse, words may be used in his hearing referring to his persistent refusal. Before long he sees himself—and takes great pleasure in the thought—as a strange child whose peculiarity in refusing to drink milk or to eat meat or green vegetables or milk pudding creates a pleasant stir and excites considerable interest in the minds of the grown-up people around him. The longer the suggestion acts, and the greater the attention paid to it, the stronger is the effect upon his mind, so that it is not uncommon to find these likes and dislikes persisting all through a long life—a legacy of unwise nursery management.

In more serious cases opposition extends to all food, so that medical advice has to be sought for want of appetite. And, indeed, the child seems absolutely without appetite, resolutely refusing to eat, clenching the teeth, shaking the head or shouting, "no, no!" Such a misfortune only befalls a child whose behaviour in this respect visibly distresses his parents or nurse and who fully appreciates the stir he has created. Recently I had a little patient two years old brought to me for this condition of anorexia nervosa. Three weeks before he had been taken in a motor car to mid-day Sunday dinner with his grandparents where everyone had engaged in efforts to induce him to eat, but without success. I explained the origin of the difficulty to his parents, when his father said to me, "You have accounted for what the child said when he saw the motor car to-day for the first time since his visit to his grandfather three weeks ago. When it came to fetch him to you he said at once, 'Not eat my dinner,' and we could not understand what he meant." In this child the sight or sound of the preparation of food was sufficient to produce a paroxysm of opposition. At the same time it was always said of him that he slept perfectly and gave not the slightest trouble in this respect, and to this suggestion he also reacted because it never occurred to him to doubt that he was a little boy who made a fuss about his meals and had no appetite, but slept well.

The only way to cure the fault is to reverse the suggestion, to seize every reasonable opportunity to speak before the child of his improving appetite, to say that he now refuses nothing, or even at times to take his plate away saying that he has eaten so much that he must eat no more. Above all we must try to hide from the child that we care at all if he eats too little. A change of nurse is sometimes needed because, unfortunately, although mothers are generally quick to appreciate the point, the nurse, with less education, is apt to persist in the policy of coaxing and urging. To her it seems as clear as daylight that to enforce one's wishes it is necessary to issue commands. The nurse who urges a child to eat, like the nurse who leaves the room with the parting injunction to the children not to put beads up their noses, has much to learn in the management of children.

The point may seem trivial to you. But if you go into general practice you will find that children will form no small part of your work and that you will constantly be consulted for this condition of refusal of food, and you must be prepared with some plan to deal with it. The mother will often say, "It is useless to write out a diet; the child will take none of these things." Unless you can convince her that the cure can only be achieved by the reversal of the suggestion, the deplorable state of matters will continue. Many of these children who show this resistance to food readily develop the further symptom of vomiting if, after much coaxing and struggling and protesting, the food is ultimately swallowed. If this happens, a very large number of useful and nutritious articles of diet are apt to fall into disrepute as the cause of the disturbance, so that in the end the child's diet may come to be deficient in some necessary constituent. Pawlow's teaching on the dependence of gastric digestion upon psychical and emotional conditions has not, perhaps, been sufficiently appreciated in its bearings upon infantile digestion. In childhood, tears flow very readily, and the tears are not the only secretion under the influence of the emotions. Nervous unrest, fits of temper and crying—with their accompanying vaso-motor changes and the setting free of the internal secretions—undue excitement and excessive mental activity, all inhibit digestion, and in childhood as in adult age are common causes of dyspepsia. When a child returns from a children's party and suffers a reaction with much sickness, it is not always fair to blame the excessive or injudicious hospitality of his hostess.

This symptom of refusal of food may be met with occasionally among adult neuropaths. Some of you may remember a case which excited some interest at the time and which was duly recorded in the *Guy's Hospital Gazette* for June 2nd, 1917. It was that of a young man, who had always been nervous and had survived, apparently with some difficulty, an ailing and invalid childhood. His appetite had always been poor. Recently, since he had received papers calling him to the army, all desire for food had disappeared and he persistently refused the appeals of his mother and friend that he should at least try to take food. His mother thought that sometimes he took some food by himself "on the sly." When he was brought to me in the Out-Patient Room we thought that we had never seen anyone so emaciated, yet there was no sign of any organic disease. His weight was only $4\frac{1}{2}$ stones.

He was admitted to the hospital for treatment, but before this could be begun he endeavoured to commit suicide by setting fire to his bed. His death followed soon afterwards.

Again, at another time I had under my care a girl of 20 years of age who had suffered for

many years from uncontrollable vomiting and an appetite so capricious that at times she would eat nothing but apples. She had been a premature baby and had been nursed through years of delicate infancy and childhood with most loving and most injudicious care. The vomiting and emaciation had become so distressing that she had been under medical treatment for many years. It had even been proposed to perform gastro-enterostomy. In a home where the sister-in-charge devoted herself to the work of disciplining and bracing the moral character, weakened by years of indulgence, she made rapid progress. Her weight increased by three stone, she took food well, and there was no vomiting. Finally, work was found her and she left the home bearing with her a sum of money taken from the sister's purse.

Such cases, with which we all meet from time to time, shed light upon the common anorexia nervosa of childhood. Often, indeed, as in the two examples I give, they show only the survival of an infantile disorder of conduct into adult life which becomes more noteworthy only because it occurs in a patient who should have reached years of discretion. In all cases the refusal of food is a kind of "negativism." The greater the efforts to persuade, the stronger the resistance. In the adult patients it was suspected that at times at least they fed comparatively heartily, "on the sly," so long as there was no appeal to them. In children, as in adults, we shall not find the symptom of refusal of food the only nervous symptom present. In the two cases quoted we note the attempt at suicide and the theft. In children we shall not often find such distressing complications as these, although they do occur, but we shall nearly always detect other clear signs of nervousness due to faults of management, such as enuresis, stammering, phobias, or tics, and so forth.

Refusal of Sleep.

As common and almost as distressing as refusal of food is refusal of sleep. Here, again, the difficulty is caused by unwise suggestions made to the child. His attention has been directed to the difficulty. It is foolish to bid a wakeful child to go to sleep, to exhort and to urge him. No one can send himself to sleep by force of will alone. When we go to bed we are seldom so tired that we fall asleep from sheer exhaustion. Yet so soon as the healthy man whose mind is at rest finds himself between the sheets he falls asleep almost with the force of an hypnotic suggestion. It is suggestion which acts, not will power. The attempt to substitute a voluntary effort for the forces of suggestion which have acted on unnumbered nights and have produced the habit, is, indeed, a chief cause of the insomnia. Again and again the sleepless man tosses from side to side and fruitlessly resolves that now he *will* go to sleep. It is so also with children. By urging them and appealing to them to go to sleep the mother has emphasised the difficulty.

Constipation.

Much of the common constipation of the nursery is due to the same cause. The excessive concentration of the nurse's thoughts on this daily question communicates itself to the child. The difficulty is emphasised, and again an attempt is made to substitute will power for forces of suggestion which are at once inhibited by concentration of the mind upon the process. Here also, just as in the refusal of food, a further stage of "negativism," that is, of active resistance with crying and struggling, is reached, so that complaint may be made by the mother that defæcation is painful. The same negativism may be shown in micturition, and mothers will give to us distressing accounts of the suffering of the child during the passing of water.

JEALOUSY AND WANT OF AFFECTION.

Mothers will sometimes complain of jealousy of an older child to a newly-born brother or sister. Students of the writings of Freud have seized upon this to demonstrate that the older child resents the mother's love for the new comer and fears a rival in her affections. Close observation of the child will not often, I think, support this view. If the mother adopts the right attitude to the older child and takes him freely and fearlessly to the new baby, sharing her delight in it with him, the child will copy her closely, using the same endearing words to the baby, so that in no time his reputation is established that he is fond of the baby and good to it. If, on the other hand, the mother, from fear of what may happen, is not able to free her manner and tone of voice from some apprehension, if the child is constantly warned not to hurt the baby, if he is forbidden to go to the cot and the baby is always snatched from his reach, then he will persist in his attempts to get at it, will regard himself as a danger to it, and may even act so as to confirm the mother's belief that he will do it harm.

In the same way some children will seemingly be actuated by an intense and unreasonable dislike for their father whom they see only at intervals and on state occasions. They will cry and resist whenever they are in his presence. Again, this is not because the child scents a rival for the affection of his mother, as Freud would have us believe, but only because the child's father—like his bed and his dinner—has been proferred to him with the wrong suggestion. He is acutely conscious of all the disturbance and distress his conduct creates and he will persist in it so long as it is taken thus seriously.

ENURESIS.

By a somewhat roundabout way I have approached the main subject of my lecture. I have dealt first with some of the other common disorders of conduct in childhood, selecting those which show most clearly their origin in the apprehensions of the grown-up people who have charge of the children, and in the unwise suggestions which they convey to them. The same forces are at work in the production of enuresis, or bed-wetting, although the matter is here often complicated by the development later on of a sense of shame and unhappiness in the child. There comes a time when the child passionately desires to regain control and is miserable about her failure, until the concentration of her thoughts on the subject becomes a veritable obsession. Every night she goes to bed with this only in her mind. Every night she falls asleep, miserably aware that she will wake to find the bed wetted. The suggestion impressed in the first place on the mind of he tiny child by injudicious management has become fixed by the growing sense of shame and the complete loss of self-confidence.

It is usually taught that a great variety of causes is concerned in producing enuresis. It is said to be due to a partial asphyxia during sleep from adenoid vegetation. It is said to be caused by phimosis, and to be cured by circumcision. It is said that the urine is often too acid and so irritating that the bladder refuses to retain it for the usual length of time. It is said that enuresis may be due to a deficiency of the thyroid secretion, and that it can be cured by thyroid extract. Such a number of rival causes may make us hesitate to accept the claims of any one of them. Certainly I have not been able to satisfy myself that any one of these conditions exercises any influence at all or is commonly present in cases of enuresis. I think that if we examine a large number of cases of bed wetting in children we can come to no other conclusion than that the cause of the trouble is due to just such a pervasion of suggestion as we have been considering above.

There are certain points in the behaviour of a child with enuresis which seem to point to this conclusion.

(*a.*) In the first place the trouble is seldom serious or very well developed in early childhood, and the reason for this, I take it, is that an occasional lapse in a child of perhaps two or three years of age is usually treated lightly and in the proper spirit of tolerance. It is only with children a little older that nurses and parents become distressed and begin unwittingly by urging the child to present the suggestion to her mind, that the bed may or will be wetted. Hence the usual history is that control was partially acquired in the second year, but that, instead of later becoming complete, relapses began to be more frequent, and that since that time all that can be done seems only to make matters worse.

(*b.*) In the second place the influence of suggestion is shown by the behaviour of the child when removed to a hospital for observation. It is the invariable experience that the enuresis then promptly stops. In hospital the attitude of those around the child is entirely different. She has the comfortable and consoling feeling that in wetting the bed she is doing exactly what is expected of her. There is even a feeling that otherwise she is showing herself to be something of a fraud, and that she has even been admitted to the hospital on false pretences. Hence, perhaps for the first time in many years, the child is free from the obsession, and the bed is not wetted.

(*c.*) In the third place it is easy to recognise in the history of many of the cases, the ill-effects of circumstances which add new force to the fear of failure or shake the confidence in the control which had been regained. Thus a boy, an only child, who had suffered from enuresis till his seventh year, had regained complete control till his eleventh year when he went to school. In his dormitory at school was a boy who had enuresis, and who was being fined and punished by the schoolmaster. The enuresis at once reappeared and continued unchecked so long as he was at school. As might be expected, school life is very inimical to cure, unless the trouble can be kept from the knowledge of the other boys. Anything which directly increases the nervousness of the child,—an illness, for example, with loss of weight and failure of nutrition, or some mental stress, such as the approach of an examination—is apt to accentuate the enuresis.

(*d.*) In the fourth place the incontinence sometimes spreads to the daytime, and the child is wet both by day and night. Further, in bad cases it is not uncommon to find incontinence of fæces making its appearance also. These extensions of the fault only take place when the management continues to be very faulty when the grow-up people around them are more than usually distressed and pessimistic, and have redoubled their expostulations and appeals.

Now these peculiarities of enuresis seem to me only explicable if we assume that the want of control is due to auto-suggestion, dependent at the beginning on the unwise attitude adopted towards the fault by the nurses and parents, and later kept up by the sense of shame and the mental distress involved. The origin of this disorder of conduct is comparable to that of the other disorders of conduct which we examined at the beginning, such as refusal of food, refusal of sleep, or the apparently incontrollable desire to bludgeon a baby brother.

Treatment of Enuresis.

The forms of treatment which have been recommended from time to time are, as might be expected, very numerous.

(*a.*) *Operative.*—(i.) Removal of tonsils and adenoids. (ii.) Circumcision.

(*b.*) *Manipulative.*—(i.) Injection of saline solution under the skin in the perineal and pubic regions, with object of lowering the excitability of the bladder by counter irritation. (ii.) Gradual distension of the bladder by hydrostatic pressure. (iii.) Tilting the foot of the bed so as

to throw the urine to the fundus of the bladder so protect the sensitive trigone from irritation.

(c,) *Educative*.—(i.) Curtailing the fluid drunk. (ii). Waking the child at intervals during the night by an alarm clock or otherwise. (iii.) Rewards and punishments.

(d.) *Medicinal*.—(i.) Belladonna. (ii.) Thyroid extract.

(e.) *By Suggestion*.—(i.) By simple suggestion. (ii.) By hypnotic suggestion.

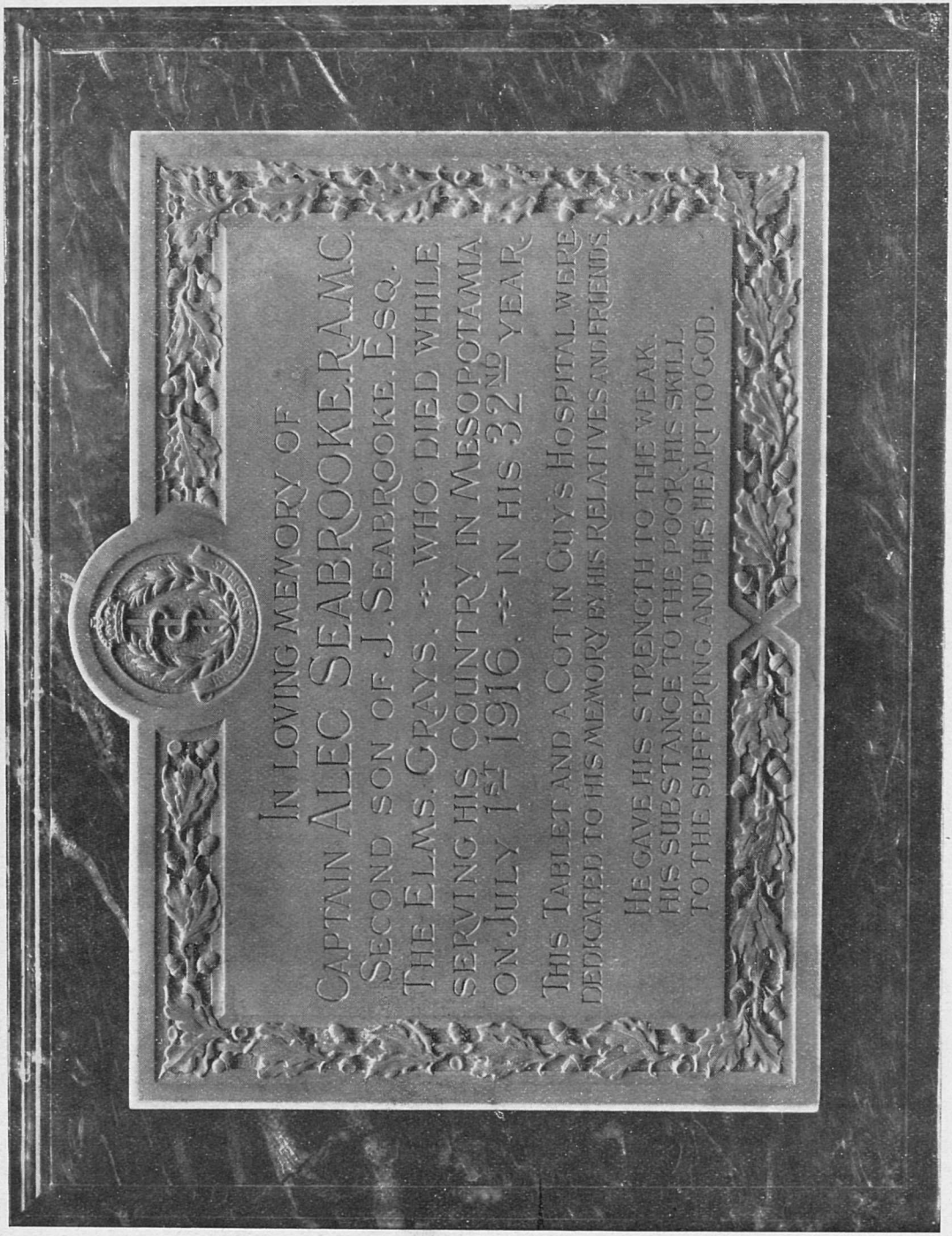
I do not think that any single one of these various forms of treatment outlined under the first four heads has any effect other than to aid the suggestion of cure which we profer in adopting it. Removal of tonsils and adenoid vegetations might conceivably cure an enuresis which is nocturnal, it cannot account for an incontinence which spreads to the day. We might believe that to distend the bladder by hydrostatic pressure was a cure for incontinence of urine, and that it acted by removing the local cause, —the smallness and contraction of the bladder,— were it not that the loss of control is so apt to spread to the rectum as well. There is no evidence that the urine is peculiarly irritating. Indeed, such evidence as we have goes to show that, as in some other neuroses, the urine in enuresis is unduly copious, and of very low specific gravity. Incidentally, we have in this polyuria a further argument against the view recently advanced that a small and contracted irritable bladder is the cause of enuresis. We do, of course, meet with cases of irritable bladder often enough, but the complaint is then not of incontinence, but always of the discomfort of having to rise so frequently for micturition.

To deprive the child of fluid, to wake her many times at night, to tilt the foot of the bed, are devices which may help in the hands of some one who is confident of his ability to cure the condition and can communicate the confidence to the child. Carried out hopelessly and pessimistically by a tired and exasperated mother, they are well calculated to strengthen the hold which the obsession has on the child, so that often enough we meet with a mother who rightly enough maintains that the more she wakes the child, the oftener the bed is wet, till she wonders where it all comes from.

As regards medicinal treatment, there is no evidence that any drug has a specific action, although I see that in both of the large English Indexes of Treatment published recently, the subject of enuresis has been entrusted to a writer who believes that enuresis is an indication of thyroid insufficiency.

The treatment of enuresis to be successful must be conducted through and by means of the grown-up persons who have the control of the children. To stop the development of enuresis in early infancy we must intervene to prevent the concentration of the child's mind on the difficulty. During the time when control is ordinarily developed, in the second and third year, judicious management of the child is essential. The emphasis should be laid upon successes, not upon failures. For every child his reputation will sway in the balance for a time. He must be helped and encouraged to self-confidence, not rendered diffident or self-conscious.

If the case is well established before it comes under our notice, the mother, the nurse, the schoolmaster, or whoever is responsible for the child's management, must understand clearly exactly what has happened. The suggestion acting on the child's mind must be altered, and self-confidence restored. The child must learn to see that the thing is not so desperately tragic. He should be told that the frouble always gets well, and that it only goes on now because he is worried about it and keeps thinking of it. If the whole environment of the child is bad, so that such a change of suggestion is not possible, and if enuresis is but one of many symptoms of mental or moral instability, it may be necessary to


In loving memory of
Captain Alec Seabrooke, R.A.M.C.
Second son of J. Seabrooke, Esq.
The Elms, Grays. — Who died while
serving his country in Mesopotamia
on July 1st 1916. — In his 32nd year.
This Tablet and a Cot in Guy's Hospital were
dedicated to his memory by his relatives and friends.
He gave his strength to the weak,
his substance to the poor, his skill
to the suffering, and his heart to God.

remove the child and place him under the influence of some one else. Sometimes the prescription of a rubber urinal, which the child can slip on at night, is directly curative. A public school boy, who was about to be sent away from school for this failing, fortified by the possession of this apparatus, wrote six months later to say that he knew now that it must be all worry that caused the trouble, because with the urinal in position he had not once had the incontinence.

In inveterate cases hypnotic suggestion is always, I think, successful. It is obvious, however, that in many cases there are objections to its use. Often enuresis is evidence that the child's home environment has been at fault, and that his mental and moral development has been retarded. The home is the culture medium, and the crop grown in this case has not been satisfactory. It is the management which must be modified or the home, if necessary, changed. Hypnotic suggestion will make this one symptom disappear promptly enough, but it will rather perpetuate than combat the cause,—that undue susceptibility to suggestion, which is characteristic alike of the little child and of many older neuropathic persons.

In general practice we are often called upon to deal with these functional disturbances in nervous children. As a rule the children are brought because mothers and nurses have made up their minds that there is something wrong physically, that the child is constipated, that micturition is painful, that the liver is out of order, and so forth. It usually happens that physical examination shows no signs of disease, and when the mother is told so, she is apt to be disappointed that no explanation is found for the symptoms, and to conclude that her doctor is wanting either in skill or in interest for the ailments of little children. On the other hand a frank explanation of the origin of the symptoms in faults of management will not often fail to convince the mother, because the extreme nervousness of the child is generally obvious to all who come in contact with him. To attempt directly to control disorders of conduct such as we have considered by medicines, is to attempt an impossible task. The study of these neuroses of childhood and infancy is not without an interest of its own, and becomes of great importance when we have to consider the causes of neuroses in adult life. Actually, these disorders of conduct form so great a part of general practice, that I think they deserve closer attention than is commonly given to them.

Memorial Service.

A Memorial Service took place at Grays Parish Church on Wednesday, November 21st, when a tablet was unveiled and dedicated to the memory of the late Capt. Alec. Seabrooke, R.A.M.C. A large number of friends were present, and a special form of service was used, in the course of which the Vicar of Grays unveiled the tablet and gave a short address from the words "Their works do follow them."

The tablet, on the wall of the north aisle, is of white marble on a dark marble base, and the inscription is:—

In Loving Memory of
CAPT. ALEC. SEABROOKE, R.A.M.C.,
Second Son of J. Seabrooke Esq., of the Elms, Grays, who died while serving his country in Mesopotamia, on July 1st, 1916, in his 32nd year.
This tablet and a cot in Guy's Hospital were dedicated to his memory by his relatives ond friends.
He gave his strength to the weak, his substance to the poor, his skill to the suffering, and his heart to God.

Honours.

M.C.

Capt. E. C. W. Starling, R.A.M.C., 9th K.O.Y.L.I., for devotion to duty under continuous shell fire during the operations on the West Front, Oct. 2nd–7th.

GUY'S HOSPITAL ROLL OF WAR SERVICE.

Medical School and Staff (Past and Present).

Further Additions and Corrections.

Ackroyd, H.	Temp. Capt.	R.A.M.C.	M.C., 1916; V.C., 1917. (Killed in action.)
Apergis, H. D.	Lieut.	R.A.M.C.,	S.R.
Aubrey, F. L.	Lieut.	R.A.M.C.,	Dental. Army Dental Surgeon.
Baker, W. L.	Act. Lt.-Col.	R.A.M.C.	
Barlow, N. A. H.	Temp. Surg.	R.N.	
Barrow, H. P. W.	Lt.-Col.(T.Col.)	R.A.M.C.	C.M.G., 1917. Deputy Asst. Director General, A.M.S. Ordre de l'Officier (Belgian), 1917.
Blackwood, B.	Temp. Lieut.	R.A.M.C.	
Boycott, A. E.	Temp. Capt.	R.A.M.C.	
Carter, A. H.	Tp. Lt.-Col.	R.A.M.C.	Mentioned for war services, 1917.
Chaning-Pearce, W. T.	Capt.	R.A.M.C.	M.C., 1917. (Killed in action, Oct. 1, 1917)
Chapple, Harold	Capt.	R.A.M.C.	
Clarke, H. M.	Capt.	R.A.M.C.	Mentioned in despatches, 1917. (Wounded)
Cockcroft, G.	Temp. Lieut.	R.A.M.C.	
Connolly, B. B.	Col. (rtrd.)	C.B.	Mentioned for war services.
Conybeare, J. J.	Lt. (rtrd. Maj.)	R.A.M.C.,	M.C., S R.
Cook, John	Capt.	R.A.M.C.	M.C., 1917.
Cooper, H.	Staff Surg.	R.N.	H.M.S. *Vivid*.
Deacon, E. F.	Temp. Surg.	R.N.	
Dear, H. J.	Cpt.(Ac.L.Cl.)	R.A.M.C.	
Dennett, T. F. P. T.	Lieut.	Queen's Royal West Surrey.	Att. R.F.C. (Killed in action, 4th August, 1917.)
Denyer, C. H.	Capt.	R.A.M.C.	M.C., 1917.
Denyer, S. E.	Temp. Capt.	R.A.M.C.	C.M.G. Mentioned for war services, 1917.
Dix, C. B.	Lieut.	East Surrey Regiment.	(Killed in action.)
Dresing, H. G.	Temp. Capt.	R.A.M.C.	M.C., 1917.
Dymott, G. V.	Lieut.	R.A.M.C.,	Dental. Army Dental Surgeon.
Eccles, H. D.	Capt.	R.A.M.C.	Mentioned in despatches. (Killed in action, August, 1917.)
Elliott, H. H.	Temp. Capt.	R.A.M.C.	M.C., 1917.
Evans, J. A.	Lieut.	R.F.A.	M.C., 1917.
Evans, L. W.	Capt.	R.A.M.C.	Mentioned in despatches, 1917.
Forty, A. A.	Temp. Capt.	R.A.M.C.	Mentioned for war services, 1917.
George, A. L.	Temp. Capt.	R.A.M.C.	Mentioned in despatches, 1917.
Gibson, H. G.	Capt.	R.A.M.C.	Mentioned for war services, 1917.
Glaisby, K.	Lieut.	R.F.A.	(Killed in action, 1st November, 1917.)

Goodall, E. W. ...	Tp. Lt.-Col. ...	R.A.M.C. Mentioned for war services, 1917.
Goodhart, G. W. ...	Temp. Capt....	R.A.M.C. Mentioned for war services, 1917.
Graham, S. G. ...	Temp. Capt....	R.A.M.C.
Greene, J. A. C. ...	Temp. Capt....	R.A.M.C. M.C., 1917. (Wounded.)
Grice, J. W. H. ...	Lieut. ...	R.A.M.C., S.R.
Griffin, E. H. ...	Temp. Capt....	R.A.M.C. M.C. Bar to M.C., 1917. (Wounded.)
Hancock, A. C. ...	Temp. Capt....	R.A.M.C. M.C., 1916. Two Bars to M.C., 1917.
Handson, L. E. C....	Temp. Lieut.	R.A.M.C.
Hardy, G. F. ...	Temp. Capt....	R.A.M.C. M.C. Mentioned in despatches. (Wounded.)
Harper, R. S. ...	Temp. Lieut.	R.A.M.C.
Hawkins, C. F. ...	Pte.	Artists' Rifles. (Wounded.)
Heckels, G. W. ...	Lieut. ...	R.A.M.C., S.R.
Henderson, T. E. ...	2nd Lieut. ...	S. Staffs. Missing; reported killed, 1917.
Horton, J. H. ...	Bt. Lt.-Col. ...	I.M.S. D.S.O. Mentioned in despatches. (Died on service, 1917.)
Jenkins, H. H. ...	Temp. Lieut.	R.A.M.C.
Jones, J. Gaymour...	Capt.... ...	R.A.M.C. 4th Brigade R.F.A.
Jones, J. H. ...	Temp. Major	Canadian A.M.C. (Wounded, 1917.)
Jones, M. P. ...	Fleet Surg. ...	R.N. H.M.S. *Vivid.*
Jones, R. L. ...	Temp. Surg....	R.N.
Jones, R. O. H. ...	Temp. Capt....	R.A.M.C. M.C., 1917. (Wounded.)
Kelsey, A. E. ...	Temp. Capt....	R.A.M.C.
Kendall, N. E. ...	Temp. Capt....	R.A.M.C.
Kidd, W. S. ...	Temp. Surg....	R.N. (Wounded, 1917.)
Knight, H. S. ...	Temp. Capt....	R.A.M.C.
Le Blanc, F. R. ...	Lieut. ...	R.A.M.C. Bacteriologist.
Ledger, A. V. ...	Temp. Lieut.	R.A.M.C.
Levy, G.	Pte.	Artists' Rifles.
Lister, T. D. ...	Physician to Prince of Wales' Hospital for Officers.	
Maelzer, N. H. S....	Lieut. ...	R.A.M.C., S.R.
Magowan, P. D. ...	Temp. Capt....	R.A.M.C.
Manning, G. E. ...	Temp. Capt....	R.A.M.C.
Marsh, A. P. ...	Temp. Lieut.	R.A.M.C., Dental.
Marsh, H. E. ...	2nd Lieut. ...	R.F.A. M.C., 1917.
Marshall, W. L. ...	Tp. Lt.-Col. ...	R.A.M.C. C.M.G., 1917.
Mayston, J. H. ...	Lieut. ...	Border Regiment. (Killed in action, 1917.)
Miller, E. A. ...	Temp. Lieut.	R.A.M.C.
Mills, P. S.... ...	Capt.... ...	I.M.S. Mentioned in despatches, 1917.
Milne, J. B.... ...	Capt.... ...	R.A.M.C. Att. R.F.A.
Morgan, E.	Temp. Lieut.	R.A.M.C.
Muir-Smith, E. A....	... ...	R.A.M.C.
Mullins, R. C. ...	Temp. Capt....	S.A.M.C.
Nelson, K. M. ...	Temp. Capt....	R.A.M.C. Mentioned in despatches. M.C., 1917.
Nicholls, E. C. ...	Lieut. ...	Royal Berks. (Wounded and invalided out.)
Oram, R. G. ...	Temp. Lieut.	R.A.M.C.

Pallant, H. A. ...	Temp. Capt....	R.A.M.C.	M.C. D.S.O., 1917.
Parry, R.	Temp. Lieut.	R.A.M.C.	
Parry-Price, H. ...	Temp. Surg....	R.N.	H.M.S. *Lion*.
Petley, C. E. ...	Capt.... ...	R.A.M.C., T.F.	Mentioned for war services, 1917.
Pye-Smith, C. D. ...	Tp. Lt.-Col. ...	R.A.M.C.	M.C., 1916. D.S.O., 1917.
Reeve, H. M. ...	Temp. Lieut.	R.A.M.C.	
Reinhold, C. H. ...	Major ...	I.M.S.	Twice mentioned in despatches.
Reynolds, Russell J.	Temp. Lieut.	R.A.M.C.	
Riddiough, S. ...	Lieut. ...	R.A.M.C., S.R.	
Riley, C. Meadows...	Temp. Surg....	R.N.	
Rippmann, C. H. ...	Temp. Lieut.	R.A.M.C.	
Roberts, E. C. ...	Temp. Lieut.	R.A.M.C.	
Robillard, J. E. E....	Lieut. ...	R.A.M.C.	(Wounded.)
Roper, R. S. ...	Temp. Lieut.	R.A.M.C.	
Savage, J. V. ...	Lt.-Col. ...	Mentioned for war services, 1917.	
Saw, Noel H. W. ...	Capt.... ...	R.A.M.C., S.R.	M.C., 1916. (Killed in action, 9th October, 1917.)
Saward, A. H. ...	Temp. Capt....	R.A.M.C.	
Scott-Pillow, H. M.	2nd Lieut. ...	R.F.C.	(Killed in action, 8th August, 1917.)
Shannon, S. S. H....	Staff Surg. ...	R.N.	
Sichel, G. T. S. ...	Temp. Major	R.A.M.C.	Mentioned for war services, 1917.
Smart, H. D. ...	Temp. Capt....	R.A.M.C.	Att. Lincs. Regt. M.C. (Wounded.)
Smith, H. Joste ...	Capt.... ...	R.A.M.C., T.F.	M.C., 1917.
Smith, H. L. ...	Temp. Capt....	R.A.M.C.	
Soper, A. W. ...	Temp. Lieut.	R.A.M.C.	
Sowerby, V. H. ...	2nd Lieut. ...	Lincs. Regt.	(Killed in action, 1st August, 1917.)
Starling, E. C. W. ...	Capt.... ...	R.A.M.C.	K.O.Y.L.I. M.C., 1917.
Stephen, L. H. Y....	Temp. Capt....	R.A.M.C.	Mentioned for war services.
Stephenson, C. M. ...	Temp. Lieut.	R.A.M.C.	
Stewart, J. L. ...	Temp. Capt....	R.A.M.C.	M.C. Bar to M.C., 1917. (Wounded.)
Stone, F. W. ...	Temp. Capt....	R.A.M.C.	Mentioned for war services, 1917.
Taylor, J. G. ...	Temp. Major	R.A.M.C.	Mentioned for war services, 1917.
Thomas, F. L. ...	Temp. Lieut.	R.A.M.C.	21st Indian General Hospital.
Traill, A.	Temp. Capt....	R.A.M.C.	(Died on service, 1917.)
Vidot, S.	Temp. Lieut.	R.A.M.C.	M.C., 1917.
Watkin, P. J. ...	Temp. Capt....	R.A.M.C.	Att. Bedfordshire Regt. M.C., 1917.
Webb, H. J. ...	Lieut. ...	R.N.V.R.	
Webber, H. W. ...	L.-Col.(Bt.Cl.)	A.M.S.	
Weller, C.	Temp. Capt....	R.A.M.C.	(Killed in action, 1917.)
Williamson, G. C. ...	2nd Lieut. ...	Essex Regt.	(Wounded and missing, 1917.)
Wilson, A. R. ...	Lt.-Col. ...	R.A.M.C.	Mentioned for war services, 1917.
Wood, C. A.... ...	Capt.... ...	I.M.S.	M.C. Bar to M.C., 1917.
Wormald, W. J. ...	Temp. Capt...	R.A.M.C.	
Wright, G. A. ...	Tp. Lt.-Col. ...	R.A.M.C.	Mentioned for war services, 1917.
Wright, L. D. ...	Temp. Lieut.	R.A.M.C.	
Young, J.	Capt.... ...	R.A.M.C.	Att. Durham Light Inf. (Wounded.)

Official and Lay Staff.

Addington, J. A.	Pte.	R.A.M.C. 77th C.C.S.
Andrews, W.	Pte.	Royal Engineers.
Baker, A.	Pte.	A.V.C. No. 5 Veterinary Hospital.
Barker, Tom	Pte.	Royal Engineers. Special Corps.
Barritt, W.	Cpl.	R.F.C.
Baterip, T. A.	Pte.	8th Devonshires.
Bishop, H. C.		R.F.C.
Bonest, J.	Pte.	Royal Fusiliers. (Wounded.)
Box, T. H.	Lance-Cpl.	Northumberland Fusiliers. (Killed in action, 4th May, 1917.)
Bush, W. T.	Rifleman	6th City of London Rifles.
Chapman, E. C.	Sgt.	A.S.C. Canteen Service, Mesopotamia.
Chapman, E. W.	Cpl.	A.S.C.
Child, E.	Pte.	R.A.M.C.
Clark, W.	Pte.	A.S.C. 25th Labour Co.
Cole, A.	Pte.	8th Royal Berks.
Coote, J.	Sgt.	24th Queen's.
Cowie, W.		(Wounded.)
Farmer, A.	Cpl.	1st Army H.Q.
Finnemore, H.	Lieut.	General List. Anti-Gas Dept.
Franks, H. D.	Cpl.	A.S.C.
Furlong, D. W.	Lieut.	1st Royal Berks. Att. H.Q. Staff. Adjutant to Battn. M.C., 1917.
George, A. J.	Cpl.	Royal Fusiliers.
Greenwood, F. W.	Pte.	D. of C. L.I.
Hanson, J. F.	Gunner	112th Heavy Battery, R.G.A. Mentioned in despatches.
Harris, H.	Pte.	24th Queen's.
Herbert, E.	2nd Cl. Stoker	R.N. H.M.S. *Pembroke*.
Herbert, P.	Pte.	Royal Engineers. (Wounded.)
Holtham, F. J.	Pte.	London Rifle Brigade.
Jones, F. W.	Pte.	Middlesex Regiment.
Jones, —	Pioneer	Seaforth Highlanders.
Kent, F. J.	Rifleman	London Rifle Brigade.
King, H.	Pte.	Northampton Regiment.
Laker, A. A.	Lance-Cpl.	Military Foot Police.
Lane, E. B.	Lance-Cpl.	29th Middlesex.
Lane, W. P.	Pte.	7th East Surrey.
Law, S. H.	Pte.	Somerset L.I. (Wounded.)
Law, W. D.	Sapper	Royal Engineers.
Louder, —	Pte.	R.A.M.C.
Mankelow, H.	Pte.	Grenadier Guards. (Wounded and discharged.)
Matthews, —	Pte.	24th Queen's.
Moore, T. E.	Lance-Cpl.	7th King's Royal Rifles. (Wounded and discharged.)

Morris, W. D. ... Cpl. ... ... R.A.M.C. Mesopotamia.
Muir, F. H.... ... Pte. ... ... Machine Gun Corps.

Nash, C. A.... ... Pte. ... ... 25th Training Reserve.
Neal, C. E. ... ... Pte. ... ... Grenadier Guards. (Wounded.)
Noble, J. ... ... Pte. ... ... Labour Co.

Ockmore, A. ... Pte. ... ... London Rifle Brigade. (Wounded, 1917.)

Popham, Rev. A. E. Capt.... ... T. 4th class Chaplain. M.C. Mentioned in despatches.

Reeves, H. C. ... Flight Sub-Lt. R.N.A.S.
Rudman, G. F. ... Sgt. ... ... Dispenser, R.A.M.C. British East Africa.

Stanton, — ... ... Pte. ... ... King's Royal Rifles.
Start, S. ... ... Pte. ... ... Machine Gun Corps. M.M., 1917. (Wounded.)
Steele, V. ... ... Lieut. ... Royal Engineers' Special Brigade. (Wounded.)
Steevens, R. F. ... Chief Yeoman of Signals. H.M.S. *Daedalus.*
Stockton, R.... ... Sgt. ... ... R.A.M.C.
Stuchbury, W. ... Cpl. ... ... A.V.C.
Sutton, R. B. ... Pte. ... ... R.A.M.C.

Thompson, A. W. ... Pte. ... ... A.S.C. Motor Transport.
Thornton, H. J. ... Pte. ... ... R.F.A.
Tiley, S. ... ... Gunner ... R.F.A.

Unwin, H. ... ... Pte. ... ... 29th Middlesex. (Wounded.)

Whitbread, J. H. ... Sgt. ... ... R.F.A. (Wounded in Gallipoli.)
Winston, J. H. E. ... 2nd. Lt. (Acting Capt.) 5th Yorks

HONOURS FOR GUY'S NURSES.

We are pleased to record that the following Guy's Nurses have been awarded the Royal Red Cross :—

Royal Red Cross, 1st Class.

Jones, Mrs. W. (née Ferry) ... Matron, Trafford Hall Auxiliary Hospital, Trafford Park, Manchester.

Royal Red Cross, 2nd Class.

Brown, Miss M A. ... ... T.F.N.S. Sister, 1st Eastern Hospital, Cambridge.
Davidson, Miss A. E. ... ... Matron, Civil Hospital, Gravesend.
Field, Miss Grace ... .. Sister-in-Charge, Auxiliary Hospital, Ongar.
Finnis, Miss F. M. A. . ... Q.A.I.M.N.S.R. Sister, 2nd Birmingham War Hospital.
Fothergill, Miss A. ... ... Nurse, Stramongate Auxiliary Hospital, Kendal, Westmoreland.
Grant, Miss E. O. A. ... ... Sister, Q.A.I.M.N.S.R., King George Hosp., Stamford St., S.E.
Hancock, Miss C. M. ... ... Lady Supt. and Sister, Foye House, Auxiliary Hospital, Leigh Woods, Bristol.
Mansfield, Miss M. M. .. ... Sister, Q.A.I.M.N.S.R., University War Hosp., Southampton.
Mumford, Miss M A. ... ... T.F.N.S., Comdt. Bevan Auxiliary Hospital, Sandgate, Kent.
Pearse, Miss C.... ... ... Sister, Q.A.I.M.N.R., Sect. 5, Reading War Hospital.
Sullivan, Miss B. ... ... Sister, Dublin Castle Auxiliary Hospital.
Windemer, Miss N. N. ... Supt., St. Mark's Auxiliary Hospital, Tunbridge Wells.

The names of the following Guy's Nurses have been brought to the notice of the Secretary of State for War, for valuable services rendered in connection with the War:—

Ballance, Miss M. E.	Sister, T.F.N.S., 1st Sthn. General Hosp., Dudley Road Sect., Birmingham.
Blayney, Miss E. K.	Matron, Royal Infirmary, Chester.
Browne, Miss F. R.	Sister, Officers' Auxiliary Hospital, London.
Canty, Miss C. E.	Sister, Mrs. Hall-Walker's Hosp., Sussex Lodge, Regent's Pk.
Drower, Miss V.	Br. Red Cross Weir Hospital, Balham.
Goss, Mrs. E. M.	Supt., Palace Auxiliary Hospital, Gloucester.
Groom, Miss E. R.	Sister, Lewisham Military Hospital, S.E.
Hooper, Miss A. M.	Matron, No. 5 Section Grouped Hospital, Exeter.
Hulbert, Miss C. E.	Sister, Q.A.I.M.N.R., King George Hosp., Stamford St., S.E.
Shepherd, Miss D. M.	T.F.N.S., 1st Eastern General Hospital, Cambridge.
Wallis, Miss G. V.	Sister, Lewisham Military Hospital, S.E.
Ward, Mrs. C. T. (née Pooley)	Comd., Burntwood House Auxiliary Hospital, Caterham.
Whitham, Miss J. E.	Sister, T.F.N.S., 4th Southern General Hospital, Plymouth.
Windemer, Miss M. E. ...	Matron, Freemasons' War Hospital, Fulham.
Yates, Miss E. M.	Matron, Officers' Auxiliary Hospital, London.

GUY'S HOSPITAL MASSAGE SCHOOL.

Brookes, Miss D.	Almeric Paget Military Massage Corps, Military Convalescent Hospital, Woodcote Park, Epsom.
Exham, Miss A. E.	Almeric Paget Military Massage Corps, Military Hospital, Catterick.

Pass List.

Examining Board in England of the Royal Colleges of Physicians of London and Surgeons of England.

At the Final Examination in Surgery held recently the following candidates were successful, and have completed the examination:—A. Bulleid, N. A. H. Barlow, J. R. Cox, J. S. Ellis, J. C. Gie, D. V. Halstead, N. Kamchorn, R. C. W. Staley, K. M. C. Woodruff. E. C. Hinde has also completed the examination,

University of London.

THIRD M.B., B,S. EXAMINATION.

F. Caldecott and C. S. L. Roberts were successful at the recent examination, and in Group I., C. H. Marshall.

Change of Name.

I, JOHN ROBERT STEINHÆUSER of Lewes, in the County of Sussex, M.D., B.S. Lond., D.P.H., R.C.P.S. Lond., Surgeon Captain, a British subject and son of the late Adolphus Henry Frederick Francis Steinhæuser, formerly of Brighton, in the County of Sussex, Civil Engineer, British subject and born in London in the year 1818, hereby give public notice that I have assumed and from henceforth upon all occasions intend to sign and use and to be called and to be known by the surname of Stenhouse only, in place of my present surname of Steinhæuser; and further that such intended change of name is formally declared and evidenced by a Deed Poll under my hand and seal bearing date this Nineteenth day of November 1917 and intended forthwith to be enrolled in the Central Office of the Supreme Court of Judicature.

IN WITNESS whereof I now sign and subscribe myself by my intended future name.

Dated this Nineteenth day of November 1917.

JOHN ROBERT STENHOUSE.

Witness—

WM. EDWD. NICHOLSON,
Solicitor, Lewes.

Obituary.

Captain HORACE DORSET ECCLES, R.A.M.C.

CAPTAIN HORACE DORSET ECCLES, R.A.M.C., who was killed in action in Flanders on the 16th August last, was an old and loyal Guy's man. He entered the Medical School in 1888, and obtained his diplomas in 1893. After the usual experiences of a newly-fledged doctor without capital, he decided to try his luck in South Africa, where he remained in practice for about three years. He then migrated to New Zealand and established himself in a practice in the North Island. Soon after he had settled there he raised a Company of Mounted Rifles, of which he became Captain. When the Boer War broke out he offered his services to the Colonial Government in either a combatant or a medical capacity. Having received a commission in the Medical Staff, he sailed to South Africa with the eighth New Zealand contingent as Surgeon-Captain.

At the end of the Boer War he returned to New Zealand and was promoted to a majority in the New Zealand Medical Service. He resumed his practice and, continuing his military service, became in a few years Lieut.-Colonel of his regiment. About three years before the commencement of the present war, finding it impossible to combine the work of his practice with the arduous duties of the command, he felt compelled to retire to the Reserve.

At the outbreak of the present war he at once applied for employment in the New Zealand army. As there was no suitable post vacant, he decided to offer his services to the Home Government. After receiving a very kind and hearty send-off from his friends and neighbours, he sailed for home in the summer of 1915. He was then too old to be accepted as a combatant officer, but a captaincy in the R.A.M.C. was offered to him, and finally he was attached as Medical Officer to the 13th Royal Irish Rifles, with whom he remained until his death.

In a letter to his father the Colonel of the Battalion wrote: "When I left the dug-out your son, as usual, was doing all he could for the wounded, and he was splendid with them. When I got back wounded they told me that he had been killed."

Eccles was of a most kind and lovable nature and will long be remembered with affection by his many friends in the Old Country and in the Colony. He was an all-round sportsman, a good shot, and a keen fly fisherman. While in the Medical School he won the three-mile race on one occasion. Like most sportsmen he was very fond of animals.

Captain Eccles was mentioned in despatches a few weeks before his death.

Guy's Hospital Physiological Society.

ON Wednesday, November 13th, Mr. M. Maizels read a paper on "The Place of Physiology in Education." The Society was fortunate in having Mr. A. R. Thompson in the chair.

The paper opened with an appeal for the recognition of physiology amongst the educational subjects. It was surely of as great a practical use to a scholar as history or geography. But while these latter subjects were most fully taught in every school, in how many was physiology taught in even the most elementary manner? Of course in some schools elementary hygiene was taught, and in many public schools also first aid, but nowhere was any attempt made to impart anything other than a few practical points.

Again, even in the home of physiology, the medical school, was it taught as it should be?

Physiology is an adjuvant to medicine, but in how many schools is any but the vaguest attempt made to correlate medicine and physiology?

Returning to the subject of physiology and general education, Mr. Maizels considered the average person painfully ignorant of the former, and supported his views by quoting the answers to a series of questions he had put to various people.

The reader of the paper then put before the Society a scheme for teaching physiology in schools, the more advanced teaching to be done by the school doctor. Up to 10 years—practical rules only, *e.g.* cleanliness and avoidance of constipation; from 10 to 12—teaching elementary hygiene such as breathing and ventilation, and reasons for above; from 12 to 14—simple survey of circulation and function of organs; from 14 to 16—dissection of frog, dogfish, rabbit, and general physiology with some simple experiments.

The paper was concluded with a survey of sex physiology and its place in such a curriculum.

A spirited debate followed, the general opinion of the meeting being somewhat against teaching physiology in schools. The discussion finally degenerated into an endeavour to decide what the teachings of physiology on the sex question really were.

Unfortunately Mr. Thompson had to vacate the chair before the termination of the meeting. Mr. A. E. Sawday was elected deputy-chairman. The meeting finally closed with a vote of thanks to the chairman and the reader of the paper.

W. W. P.

Papers by Guy's Men.

F. N. Doubleday, L.R.C.P., M.R.C.S., L.D.S. Eng.: On dental crowns for anterior maxillary teeth.—*Brit. Dent. Journ.*, Nov. 15th, 1917.

Lieut.-Col. Alfred J. Hull, F,R.C.S.: Direct Transfusion of blood.—*Brit. Med. Journ.*, Nov. 24th, 1917.

Correspondence.

To the Editor of GUY'S HOSPITAL GAZETTE.

The Physical Society.

SIR,—Now that the Ministry of National Service has persuaded the War Office that the maintenance of the medical profession is a national necessity, we may expect a continuance and perhaps an increase in the educational activities at the Hospital. It therefore seems desirable to consider the possibility of reviving in some form the work of the Physical Society. The depletion of clinical teachers makes it all the more important that the students in the wards and Pathological Department should avail themselves of all opportunities of mutual study of their cases and post-mortem specimens. It should be quite feasible to arrange during the winter for fortnightly sessions of the Clinical and Pathological Evenings, which were always the most popular features of the Physical Society. A good attendance should be assured if these meetings were held at 4.30 or 5 p.m., especially if they were associated with a strictly rationed tea. Perhaps the Assistant House-Physicians would undertake the necessary organisation work.—I am, yours faithfully,

VERY OLD PRESIDENT
PUPILS' PHYSICAL SOCIETY.

Nov. 21st, 1917.

SIR,—One cannot but regret that the hospital authorities should have seen fit to add yet another to the many eyesores encountered on one's way thereto. I refer, of course, to the barricading of Guy's statue in the front quadrangle. From what one hears of the deceased gentleman, he must have been a person of considerable courage, and I cannot help feeling that from the astral plains he will view with considerable disfavour this confession of their pusillanimity.

Moreover, a precedent is a dangerous thing to set up, and for all we know the L.C.C. or whoever is responsible for the statues and monuments that grace (I had almost written disgrace) our streets, may see fit to copy the hospital's example on a gargantuan scale. That some of the statuary commemorative of the Hanoverian dynasty should be thus screened from the vulgar gaze would, I confess, leave me cold, but consider the deplorable results, artistically, of thus swathing, say, the Monument or Nelson's Column. Nay, let us be courageous—besides a hoarding is, as a rule, even uglier than a London statue.—I am, Sir, yours faithfully,

GERALD H. FITZGERALD.

Porchester Square, W.
November 21st, 1917.

The Tongue in Hemiplegia.

DEAR SIR,—In Mr. Grace's interesting report on a case of cerebral hæmorrhage printed in your last issue the following sentences occur. "His mouth was partly open and it was noticed that the tip of his tongue was

pointing to the right, that is, *away from* the paralysed side. According to the text-books, the deviation is *towards* the paralysed side."

There is, I think, some confusion or misunderstanding h re. The usual statement is that when in hemiplegia the tongue is *protruded*, it is deflected towards the paralysed side; obviously because the healthy muscles tend to pull the base of the tongue more forward on their side. But when the tongue is lying in the mouth unprotruded as was stated to be the condition in this case, the deflection, if any, of the tip of the tongue will depend upon the ton eof the intrinsic muscles. If the paralysed muscles are rigid the tip will point towards the paralysed side, but if they are flaccid it will point the other way. It is not stated whether the paralysed muscles of the limbs were flaccid or rigid. But it may be assumed that the tongue muscles on the paralysed side were flaccid, and that over action of those of the unparalysed side was responsible for the deviation; just as the healthy facial muscles draw the mouth over towards the unparalysed side in ordinary cases of facial paralysis.

This deflection of an *unprotruded* tongue is by no means of common occurrence in hemiplegia, and is not often alluded to in the text-books.—I am, yours, &c.,

21st Nov., 1917. L. E. S.

Change of Address.

Lieut. F. J. Cutler, No. 7 Field Ambulance, B.E.F., France.

F. W. Paul, L.D.S., R.N.V.R., to The Infirmary, R.M.A. Barracks, Eastney.

Capt. W. L. Gwyn Davies, R.A.M.C., Garthe, St. Clears, S. Wales.

Lieut. J. J. Conybeare, R.A.M.C., The Imperial Hotel, Blackpool.

Lieut. J. W. H. Grice, R.A.M.C., The Imperial Hotel, Blackpool.

Lieut. O. V. Payne, R.A.M.C., from Lansdowne House, Alton, Hants, to 49th Stationary Hospital, Salonika Forces.

Capt. H. G. Dresing, M.C., R.A.M.C., from 1st Battn. (Royal West Surrey) Regiment, to 17th C.C.S., B.E.F.

Lieut. W. R. Ransford, 3rd Battn. 5th Gurkha Rifles (Frontier Force), c/o National Bank of India, Ltd., Bombay, India.

Capt. S. W. Coffin, R.A.M.C., c/o Messrs. Cox & Co., Bombay, India.

Pte. G. Levy (766785), Hut 21, D Company, 2nd Artists' Rifles, O.T.C., Hare Hall Camp, Gidea Park, Romford, Essex.

Lieut. F. N. Sidebotham, R.A.M.C., Convalescent Depôt, Advance Base, Bagdad.

Rugby Football.

GUY'S v. A. S. C. (BLACKHEATH).

A very strong wind blew down the ground away from the gate end at Honor Oak Park, when these sides lined up on Saturday, November 24th, and Guy's had to face it. One or two changes from the previous weeks were noticeable in the Hospital team. F. Crook back from France was among the forwards. He played three-quarter when with us some four years ago. Another returned soldier was in the pack, B. H. Laver, who has been in the R.F.A. since the war's commencement, and has seen much service.

The A.S.C. team played very differently to what they did on their former visit. Their forwards have improved wonderfully in everything but the art of heeling the ball cleanly, and one doubts if our men can teach them how it should be done. There was not half enough push in the scrum, nor did the ball come out to our halves at all well. In the loose the pack were ragged, and Crook "hoofed" the leather with such mighty energy that he enabled the soldier's back division to clear repeatedly. He showed fine energy though, and did much useful work, as did Van der Merwe and Leviseur in a less apparent way. Curle had no chance at all. Bekker still holds on too long, and Flooks must run straight. Three-quarters must not run back or round, especially in the inside position. Flooks should be mentioned for his safe handling and kicking, it was well done. Rose was very useful, he would be much more so if only he would practice kicking with the left foot.

It was a keenly contested game with plenty of energy, and early on we got a try through Tonkin who ran well, he has a very neat touch, rather reminiscent of the great Teddy Morgan. Then Reitz, who has an uncanny way of always being on the ball, scored. Neither try was added to, which was not surprising, as the kicks were into the eye of the wind. These early successes looked like a big score to follow. Our opponents, and too much sticking to the ball, prevented this. The A.S.C. forwards improved wonderfully. Once Curle came along in fine style, but he was grassed in time. Play went to the other end, a forward slung out an impossible pass to Curle from a line-out. Howels, Blake and Chidzey fastened on it and rushed over the line where Howels scored. Blake's finely judged kick just missed. Ends were changed.

The second half was evenly fought. Thomas scored a try for Reitz just to miss the extra points with a grand effort. A "free" was awarded Guy's in their own 25, a long high punt being followed up at great speed by Crook. The A.S.C. missed the ball, Crook dribbling like a "soccer" man with the leather at his feet got it over the line and then had the bad luck to lose the touch. The effort deserved a try. Some of Guy's passing in the high and difficult wind was good, but all of it was obvious. We must try the unexpected and practice the reverse pass or any old pass except the foolish pass. The obvious one is so easily anticipated, Final score, 3 tries to 1.

GUY'S:—S. Rose, C. L. Curle, G. McK. Thomas, W. T. Flooks, B. M. Tonkin, F. Bekker, W. H. Cellier, F. W. Reitz, B. H. Laver, F. Crook, H. O. Long, D. J. Morrison, H. J. Leviseur, D. J. O'Meara, J. Van der Merwe,

Marriage.

MULLINS—JACKSON.—Married at Holy Trinity Church, Eltham, on Nov. 20th, 1917. Jocelyn Genville Selmes Jackson, younger daughter of Mr. and Mrs. F. S. Jackson, of North Park, Eltham, to Captain H. R. Mullins, South African Medical Corps, third surviving son of the late Canon Mullins and of Mrs. Mullins of Grahamstown, South Africa.

Deaths

ODHAMS.—On Oct. 26th, at Norwich, George Frederick Odhams, M.D., C.M. Edin., aged 56.

FOWLER.—On July 26th, at Bendigo, Victoria, Australia, Walter Fowler, M.B., B.C. Cantab., F.R.C.S. Eng., aged 59.

WELLS.—On the 22nd November, at Springfield, South Norwood Park, S.E., Charles Henry Wells, the dearly-loved husband of Annis Wells, for many years Secretary to the Treasurer and lately Clerk to the Governors of Guy's Hospital, aged 62.

J. J.

GUY'S HOSPITAL GAZETTE.

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The Dressers' Room.

THE suggestion made in our last issue has met with so varied a reception, that it will not be out of place to consider the question in some detail, in order that a better understanding between present dressers and those holding senior appointments may be reached.

It will be of advantage to trace the origin and development of the Dressers' Room. We believe that this custom arose from the fact that the Take-in Firm, after operating most of the night, felt the need of some refreshment, and that, at first, few besides the firm in question came to supper. Very soon, however, it was realised that men holding house appointments would, if they attended, add greatly to the enjoyment of the evening. These conditions relating to the men who might visit the Dressers' Room, without a feeling of encroachment gradually faded, and the ideal state of affairs prevalent at the outbreak of the war was arrived at. In this way the Dressers' Room played an important part in the life of the Hospital and did much to create an understanding between the men holding junior appointments, and those who had already succeeded in gaining the much cherished house appointment of that period. The House Surgeon gained confidence in his dressers; the latter learnt the necessity of the somewhat tyrannical attitude assumed by the former. Men who had just entered the wards were given an insight into the affairs of the Hospital, and learnt to regard themselves as directly responsible for the successful issue of some of these affairs.

Some eighteen months ago the price of food had advanced to such an extent that many men, who had previously visited the Dressers' Room without a thought began to feel that they were abusing the hospitality of the dressers, who now found that a successful Take-in week was a financial matter worthy of consideration. The dressers persevered and did all in their power to maintain the traditions of the Surgery. They issued frequent invitations and made a point of asking everyone, who chanced to cross their path, to attend supper; no word was ever spoken concerning the increase of expenditure.

Still the attendances fell and at the present time the average number of men who visit the Dressers' Room is, perhaps, one-half the number that present House Surgeons and Physicians saw when they served their second three months in the surgical wards.

We do not doubt that many dressers have discussed between themselves the cause of this decline in the popularity of the Dressers' Room, but they have either failed to see the obvious reason or have been unwilling to admit it. It is clear that no man living at the College at present can visit the Dressers' Room with the same thoughtlessness as previously. He knows that the present dressers are finding it about twice as expensive as he did during his dressership, and his visits are consequently few and far between. He feels that unless he is actually on duty in the Surgery he has no right to take supper with the Take-in Firm.

What is the result of this decline in the number of men attending the Surgery? A most important social organisation at the Hospital is being swept away, and the Dressers' Room is assuming the limited rôle it held when founded. Discussion is limited to the affairs of the Take-in Firm, in which the one or two visitors have little interest. Why wonder, then, that so many new men fail to be imbued with the feeling that they are part of the Hospital and that the successful running of the Hospital is in some part due to their efforts? Why wonder, then, that the pernicious idea of coming to the Hospital to learn enough to qualify is being embraced by so many new men?

Every effort has, therefore, to be made to re-establish the popularity of the Dressers' Room. The suggestion of placing a box in the Dressers' Room has been welcomed by all who hold appointments senior to those of Full Surgeons' Dresser, so that if the latter would free themselves from the idea that their privileges are being limited, there is every prospect that the Dressers' Room will again play an important part in the affairs of the Hospital.

There is one objection, worthy of discussion, that Dressers have made against casual visitors contributing a small sum towards the expense of any particular week. In their opinion it will allow men with whom they have personal differences to attend the Dressers' Room, whereas previously such would have been excluded because they would have received no invitation. We cannot believe that the present spirit of the dressers is so mean as to find no other method of settling these private differences. The number of men so obtuse as to venture to attend supper when it is perfectly clear their presence is undesirable, must be remarkably few.

On the other hand, we agree with the view voiced by the majority of the present dressers that the O.P.O. and others on duty in the Front Surgery should not be allowed to make any contribution. It will be remembered that in "Passim" of our last issue we referred to "casual" visitors.

In conclusion, we wish to thank the Take-in House Surgeons of the last fortnight for the very practical means they have taken to popularize our suggestion. A box has been affixed to the door of the Dressers' Room, and it is hoped that men who have kept away from supper for reasons, we have discussed, will now turn up and contribute whatever sum they think fit, in spite of the feelings of any particular dresser.

Roll of Honour.

Killed in Action.

On Dec. 1st, Capt. J. A. Edmond, R.A.M.C., attd. 60th Field Ambulance.

Passim.

At a meeting of the Guy's Hospital War Savings Association, held on December 7th, it was decided to form a "Prize Fund," and we would draw attention to a letter which appears in our correspondence columns appealing for contributions. Guy's was one of the first among the Hospitals to start a War Savings Association, and, judging by the number who have already joined, it must be doing good service in encouraging thrift, and in providing additional funds for the National Exchequer. If, by means of Prizes, increased stimulus can be given for subscriptions towards the purchase of Certificates during the month of December, those, who may be willing to contribute to the Prize Fund, will thereby not only show their appreciation of what the Association has already accomplished, but will be materially helping to make it a still greater success. We understand that all purchasers of Certificates through the Association during the month of December will participate in the Prize Drawing, which will take place early in the New Year.

We hope, therefore, that all present members, and any others who can see their way to join the Association, will endeavour to purchase as many War Savings Certificates as possible during this time, so that they may have an increased chance of gaining a prize.

During the last few weeks it has been necessary to take in several cases from the District, and the Junior Charity and Externs have again found extreme difficulty in finding any means of conveying these patients to the Hospital. It will be recalled that a fund was started some months ago, and that sufficient money was soon collected to provide a wheeled stretcher for the district. Unfortunately no further steps were taken in this direction until a fortnight ago, when we called on Mr. Saltmarsh and found that the R.O. had been called upon to choose a suitable stretcher. We understand that the order has been placed and will shortly be executed, in spite of labour difficulties. As the maternity district served by the Hospital is so large, it may be argued that the use of the stretcher will be limited; this, however, is more apparent than real, for the outskirts of the district are well within 45 minutes' walk from the Hospital, and a wait of between one and two hours for a taxicab is by no means a rare occurrence, in the early hours of the morning.

We learn that at the two "Nigger" rehearsals held in the Physiological Theatre the performers were not at full strength. The absentees proved to be Residents. Up to now the attendance of the Out-Patient Officers has been quite regular. We have no wish to belittle the arduous duties of those holding house appointments, but we should imagine that the facilities for attendance by Residents are greater than those offered the O.P.O.'s.

We understand that the injury sustained by Mr. Curle will prevent him from playing football for some considerable time. During the last three years he has, by his unaided efforts, rendered it possible for Guy's to run a footer team. We take this opportunity of thanking him on behalf of those who still find time to keep the ball rolling and of wishing him a speedier recovery than is apparently anticipated.

Is it inefficiency or is it economy on the part of our administration which still allows private houses to be used as hospitals for officers? In the early part of the war it was no doubt

necessary, and the patriotism of the owners in coming forward so eagerly was most laudable. It had one drawback, however, and that was that full advantage was sometimes taken of the obligation under which the State had put itself. As a result, many of the hospitals were left in the charge of laymen. The administrative part of the work was, and is, well carried out. Now, however, after three years' "experience," some of them have extended the sphere of their activities. We have in mind a person, who with no other surgical training than she has acquired in her present capacity, has been known to countermand the orders of the M.O. in charge, and has even gone so far as to order and administer drugs on her own initiative.

Honours.

D.S.O.

Temp. Capt. E. H. Griffin, M.C.

M.C.

Lieut. H. J. Henderson.

Wounded.

Capt. D. H. A. Galbraith, R.A.M.C.
Capt. K. M. Nelson, M.C., R.A.M.C.
Capt. T. Stansfield, R.A.M.C., attd. Manchester Regiment.
Lieut. M. B. Taylor, R.A.M.C.

Casualties amongst the Sons of Guy's Men.

Lieut. P. B. Clarke, Canadian Infantry, killed in action; only son of Dr. W. F. Clarke, of Toronto, Canada.

Mentioned in Despatches.

Col. G. T. Rawnsley, C.M.G., A.M.S.
Lieut.-Col. E. H. Starling, F.R.S.
Temp. Capt. R. D. Attwood.

Obituary.

CHARLES HENRY WELLS.

1855—1917.

Mr. Charles Henry Wells died on November 22nd at Springfield, South Norwood Park, at the age of 62. Two years ago he retired from the post of Clerk to the Governors of Guy's Hospital, thus terminating an active association with the work of the Hospital and Medical School which had lasted for more than thirty-five years.

On November 20th, 1915, the Guy's Gazette reproduced a photograph of Mr. Wells, and published a resolution passed by the Governors of the Hospital expressing their appreciation of the efficient manner in which he had performed his duties and the loss to themselves with which they regarded his retirement. Reference was also made to the presentation to him of a silver tray in recognition by the Governors and Medical Staff of his valued services, and of an illuminated album inscribed with many names on behalf of his fellow-workers, officers, and servants of the Hospital and Medical School and Members of the Nursing Staff and Trained Nurses' Institution.

Mr. Wells first became connected with the Hospital by his appointment in 1880 as Clerk to the Dean of the Medical School, at the time when the office of Dean was held by Sir Frederick Taylor. He continued in this position for many years during the Deanship of Sir Cooper Perry and Dr. Lauriston Shaw. In this capacity he became well-known to many generations of old Guy's Students, who have a keen remembrance of the genial interest he took in all matters connected with their welfare at the Hospital, and many of whom are indebted to him for the care, with which he watched over

their interests in the arrangements he helped them to make for embarking upon their life's work in private practice.

Towards the close of Mr. Lushington's period of office as Treasurer to the Hospital in 1895, when, owing to the depreciation in agricultural rents, the financial position of the Charity was straitened, Mr. Wells was appointed to the newly-created office of Secretary to the Treasurer. It was his chief duty in this capacity to assist in the organisation, under Sir Cooper Perry, who had recently become Superintendent of the Hospital, of a campaign to resuscitate the finances of the Hospital by an appeal for pecuniary support from the public. Before his appointment as Clerk to the Dean, Mr. Wells had had a sound training in finance in the city, and this experience was of great value in the special work he was now called upon to do in this connection. The great success of this public appeal, inaugurated by Mr. Gladstone, at that time Senior Governor of the Hospital, and in connection with which King Edward VII., then Prince of Wales, became President, and Mr. Cosmo Bonsor Treasurer of the Hospital, is well known to all. Towards this success Mr. Wells' enthusiasm and energy contributed in large measure.

Upon the death of Mr. Henry Williams, who for many years was Clerk to the Governors, Mr. Wells was appointed to the vacant office. This position he held till his retirement at the age of 60, at which time he had already begun to show some signs of failing health. After his retirement it was his chief pleasure to welcome his old friends from Guy's to his comfortable house and pretty garden at Norwood, and to learn from them of the activities still going on at the Institution he loved so greatly, and which he had served so well. He was deeply interested, not only in the Hospital and School themselves, but in all institutions connected with them, some of which he had taken an active part in founding, and in connection with the financial success of most of which he had at various times been consulted. Especially was this the case with the College, the Clubs' Union, the Atheletic Ground at Honor Oak Park, the Trained Nurses' Institution, and the Guy's Hospital Gazette.

On the revival of the Gazette after its temporary suspension some 25 years ago Mr. Wells was appointed Business Manager, and in this position until two years ago he watched over its finances with great solicitude. He was one of the original founders of the Clinical Research Association and maintained an active interest in its administration until his death.

Mr. Wells' numerous friends have noted with sorrow his ill-health and gradual loss of strength during the last few years, disabilities which he has borne with cheerfulness and courage. The sudden development of more serious symptoms a few days before his death was not altogether unexpected. His generous and kindly disposition had endeared him to a large circle, and while his loss will be widely regretted, and by none more than by his fellow-workers at Guy's, his valuable services will be long remembered.

In 1897 Mr. Wells married Miss Annis Macleod, of Guy's Hospital, who survives him.

The funeral service was held at St. Mark's Church, South Norwood, and the interment took place at Elmers End Cemetery on Monday, November 26th. A large number of Mr. Wells' friends and former colleagues were present, amongst those from Guy's being Sir Cooper Perry, Dr. Shaw, Major Fawcett, Dr. T. G. Stevens, Dr. J. F. Richards, Mr. Kirkland, Mr. Robbins, Nurse Farrow, Nurse Earl, Mr. Curry, Miss Newton, Miss Hall, Miss Finnemore, Miss Evans, Mr. Beckwith, Mr. Fred. Ash, and Mr. Martin Millar. Many representatives of the staff of the Clinical Research Association also attended.

Guy's Hospital Roll of War Service.

Correction.

In the list published in our last issue we regret Lieut. J. H. Mayston, Border Regiment, wounded, should have been reported "killed in action."

Hæmaturia.

CLINICAL LECTURE BY A. R. THOMPSON, Ch.M., F.R.C.S.

Gentlemen,—There are in the wards at present three interesting cases of hæmaturia, and I thought that we might consider them this afternoon. There are, however, some rules about hæmaturia which it will be desirable to mention at once.

1. Hæmaturia is not a disease, but a symptom, indicating, in a large number of cases, grave disease of the urinary apparatus.

2. Hæmaturia is not a common symptom of vesical calculus.

3. Hæmaturia should be investigated with a cystoscope during an attack of hæmorrhage. Irrigation of the bladder as a preliminary to cystoscopy, frequently benefits the patient immensely, and helps to overcome the hæmorrhage; moreover, the origin of the blood can be seen by means of the cystoscope and thus localised.

4. Hæmaturia is rarely fatal in itself. Its danger lies in the disease which causes it.

The first case I want to draw your attention to is that of A. P., a male, æt. 52. He came to my out-patient department on the 10th October, having been sent up by Dr. Nisbet Wright, of Grange Road, with the history that in the early part of August he had pain in passing water. Then the pain seemed to leave the patient, but on October the 10th it had extended round the back and front of the abdomen. The pain kept him in bed for two weeks. About three weeks before October 10th he noticed blood in his urine; sometimes some congealed or clotted blood was present. I will at once go on to describe the examination which was made. He was skiagraphed, with a negative result. I then ordered him mist. buchu, which is in the old Pharmacopœia, not in the new one; it is a most excellent bladder sedative. It contains potassium citrate, tincture of hyoscyanus, and infusion of buchu. But the hæmorrhage still persisted. We then prepared him for cystoscopy. In the limited time we had at out-patients we could not stop the bleeding sufficiently to warrant any opinion being given upon the bladder I then ordered him tinct, opii, 3ɱ three times a day for four days. The reason I give that dose at out-patients is, that, assuming that the kidneys are absolutely useless as regards the elimination of opium, we know that by the time he visits us again the patient will not have had a poisonous dose. The opium had no effect.

On October 31st we irrigated him with boracic lotion at a temperature of 120° F. This had no effect on the hæmorrhage On November 3rd when he came up he was so anæmic that we were compelled to admit him without having arrived at a diagnosis. When he came into the ward, I confess that his extreme anæmia, the persistence of the hæmorrhage, and the absence of any localising renal signs prejudiced me in favour of the idea that it might be a growth of the bladder. And in that connection please remember the patient's age was strongly in favour of that possibility. We prepared him for cystoscopy, and a very important sign of hæmorrhage from the kidney manifested itself, that is, that it took a long time to clear the urine of sanguineous fluid. Some of you will remember that at the time I said we might, on that account, have to revise our diagnosis, and conclude that the blood was coming from one

or other kidney. Having got the fluid reasonably clear, I passed the cystoscope and found, after some search, blood coming away from the left ureter. The localisation of the hæmorrhage was then made with regard to the left kidney, and as examination by X-rays—which was conducted more deliberately than at Out-patients—still disclosed no calculus, one was afraid it was a case of new growth in the kidney. I decided, as the patient was very anæmic, that it would be best to cut down on that left kidney and find out what was the matter with it. You will note that all we had done was to localise the bleeding to the left kidney, and act accordingly. Mr. Marston very kindly assisted me at the operation. We found the kidney extraordinarily mobile, and with some evidence of formation of new fibrous tissue round it. The ureter itself was perfectly healthy. I incised the kidney and found nothing except the mobility to account for the bleeding. If you go into Astley Cooper ward now, and look at No. 13's urine, a specimen of which is over his bed, you will find that although the urine is still a little smoky in appearance, blood has practically left the urine, and therefore I am hoping that our diagnosis that it is a case of movable kidney is correct. The sudden onset and the mobility of the kidney would be strongly in favour of this view. The fact that the hemorrhage has ceased after the operation for fixation seems to point to the same conclusion. Movable kidney is not uncommon in men. Treatment of it by operation and fixation is eminently successful. As a sign of movable kidney in males, hæmaturia is very common. All the cases of movable kidney in males that I have cut down upon have had hæmaturia. The bleeding has now ceased and the urine is quite clear. (6/12/17).

The next case I want to draw your attention to is that of C. E., aged 63. I have already cystoscoped him, but I propose to cystoscope him tomorrow morning at 10.30, and I shall then be pleased to demonstrate what I know to be the lesion, because I have seen it. He was sent up by Dr. Bryce Poole, of Southend-on-Sea, with the history that he is employed as a messenger at the Law Courts, and he has had various attacks of hæmaturia during the past three years. He is now in No. 15 bed, Astley Cooper ward. The last hæmorrhage occurred in the early part of July, 1917, and was very severe; his urethra got blocked with blood-clot, and retention was caused. The bleeding lasted about two days, and has left the patient very debilitated. He has lost about ten pounds in weight during the past year. I cystoscoped him at out-patients, and we found a papilloma situated on the left side of the bladder, above the ureter. It was a simple papillomatous growth. Now, in order to prevent my repeating things to-morrow in connection with the demonstration of the cause of hæmaturia, I wish to digress in order to tell you something about the cystoscopic appearances of simple growth.

The lamp casts beams of light varying with the particular cystoscope, but generally passing out in a fan-shaped arrangement; that light enables you to see through the prism of the instrument. We found in this case, without much difficulty, a growth lying in the region I indicate, just above the left ureter. I have at last found something with which to compare a growth in the bladder which is neither a vegetable nor any other article of food. It is exactly like the sea anemone which you see in quantity among the rocks on the sea shore. Such growths have a pedicle, and from that

pedicle there branch out very thin, finger-like processes. Owing to the fact that these growths are floating in the urine, you can see the central blood vessels passing up each papilla, in other words, each papilla has a red core, which is composed of a blood vessel and a whitish-yellow exterior.

Perhaps it occurred to some of you that the appearance might be rather like that of a palm-tree, and, that being the case, you might say the pedicle was the trunk of the tree. One characteristic of a tree-trunk and its branches is, that it casts a shadow. In cystoscopic examinations, if you see a shadow you know the growth has a pedicle, and you can say it is a simple growth, not malignant. A malignant growth is sessile, necrotic, and white. A simple growth, then, has the colour of normal mucous membrane, bears a multitude of finger-like processes, and casts a shadow. This man's growth is papilliferous and casts a shadow. You will, therefore, remember growth of the bladder, either simple or malignant, as a cause of hæmaturia.

The next case is introduced by way of comparison with the first, and is that of a woman, H. W., aged 20, under the care of Dr. Tilbury and Dr. Fawcett, and who is at present in bed 23 in Esther ward. The history is that she was admitted on account of pain over the left kidney on October 22nd. For some years the patient has had occasional pain over the left kidney. When quite young, attacks occurred at fortnightly intervals, but for the past few years they have only occurred twice during the year. This year, however, the patient has already had three attacks. The attacks occur at irregular intervals, commencing more often at night, and usually lasting 48 hours. They are invariably accompanied with severe retching and loss of appetite. The pain commences in the back, over the left kidney, and works round the abdomen. During the attacks the patient has never noticed anything abnormal with her urine, except a little thickening, no increased frequency or pain on micturition. Tenderness is usually present over the site of the pain on the second day. This year the attacks occurred at Easter, at August Bank Holiday, and a fortnight ago. The patient has felt rather weak since the last attack. She was X-rayed at Guy's four years ago, but she says nothing abnormal was seen. The patient lies comfortably in bed and shows no sign of ill-health; she is well covered; the cardiac, vascular, respiratory and alimentary systems are all normal, except that she is at present under dental treatment. Incidentally, I strongly advise you to always pay great attention to the teeth when dealing with urinary disease. We are at present having a dentist in to see the teeth, with the view to their being treated after the operation. The urine is very pale, of a light straw colour, specific gravity 1010; it contains no albumen or sugar. Blood corpuscles have been seen in it as well as several epithelial cells. Apart from that, however, there has been no attack of actual hæmorrhage. Dr. Fawcett saw the patient, and thought it was a case of kinking of the ureter due to "moveable kidney." He excluded calculus because the X-ray examination was negative, and there was no macroscopic blood. He excluded pyelitis because there was no pus in the water, and there was no increased temperature during the attacks. He asked me to examine the patient, with the view to treatment. We

cystoscoped her, and attempted to pass a catheter along the ureter. This we did to a distance of 5 c.m., but no further. And I thought the ureter was slightly narrowed, and that this was the reason the catheter would not pass further. As the pains were causing the patient great inconvenience, I decided to cut down, and, with Dr. Fawcett's consent, I did so. I found a small, hydronephrotic, extremely movable kidney. We incised the kidney and the ureter, and placed a tube in the kidney wound, and a bougie was passed through the ureteric wound, right down to the bladder, and no obstruction was found. There was a great deal of fibrous tissue formation round the kidney and round the upper part of the ureter, and on division of the fibrous tissue bands the dilated pelvis almost at once resumed its normal appearance. Now, this is a case of movable kidney which has gone a great deal further than the first case of movable kidney I told you about, and yet the only evidence of blood was revealed on microscopical examination.

This case shows you that one may find a very extensive lesion in the kidney following upon movable kidney without any, or only microscopical, evidence of hæmaturia in the female, yet in connection with the male there may be slight changes in the kidney and a good deal of hæmaturia. The reason, I think, is that in the woman movable kidney is a chronic condition, whereas in the male it is due to a sudden injury, in other words, movable kidney in the male is a dislocation. So you will put this case in opposition to the first one I related to you; the last one shows that extensive changes may take place in the kidney without hæmorrhage occurring.

After considering these three cases, we will go into another case, which was under the care of Mr. Dunn, and is at present in the ward. It shows the value of cystoscopic examination. The patient was admitted with a history of having sustained such a violent injury as to produce fracture of the pelvis in the region of the obturator foramen. When he came in he was very much collapsed, there was blood in the water, but a catheter could be passed. As there was some reason to suppose that the fracture of the pelvis might have been associated with some damage to the bladder, I passed the cystoscope. The fluid in the bladder, whilst clearly under some tension, was so sanguineous that a definite opinion as to rupture could not be given. But the mere fact that the bladder held fluid under some tension was good evidence that the bladder was not at any rate extensively ruptured, and certainly not ruptured into the peritoneum. On the next day Mr. Dunn saw the patient, and thought that, in view of the cystoscopic examination, he would not cut down upon the bladder or urethra, although he felt that if such an examination had not been done he would have been strongly inclined so to do. As, twenty-four hours after the injury, the patient was no better, I felt it was not justifiable to leave him without making another attempt to find out what was the actual injury. Blood was still coming with the water, and I passed a Wyndham-Powell endoscope, and found in the region of the compressor uræthræ muscle a great deal of contusion in the mucous membrane of the urethra, with blood oozing from the surface. I passed an irrigating cystoscope, and washed out the bladder through it. Then I examined the bladder, and found it absolutely intact. In order to show Mr. Dunn's firm that

the bladder was a healthy one, I passed an ordinary examining cystoscope, but the prisms became so covered with blood that an examination was impossible.

There was then hæmaturia; there was the fact that at the end of twenty-four hours he was no better, and when I passed the urethoscope there was evidence of bleeding from the urethra. On passage of the irrigating cystoscope the bladder was found to be intact, but on using the ordinary cystoscope, blood was carried in on the prisms, and so precluded a proper examination. We had sufficient evidence, therefore, that the injury was not in the bladder, but was in the urethra. And if an injury occurs to the posterior part of the urethra, blood may gravitate back into the bladder, and hæmaturia may result. I want before concluding the lecture, to give you a table of the likely causes of hæmaturia, excluding the medical causes of hæmaturia, such as acute nephritis.

1. Growth of the bladder, either simple or malignant.

2. Cystitis. In connection with that, remember that the French recognise that cystitis of very acute nature may give rise to extraordinarily profuse hæmorrhage, so that the patient may be quite anæmic, and appear likely to die if something is not done in the way of irrigating the bladder. Cystitis is not common as a cause of hæmorrhage.

3. Enlarged prostate.

4. Injuries to the bladder and posterior part of the urethra.

5. Calculus anywhere in the urinary tract.

6. Growths of the kidney.

7. Tuberculous disease of the kidney.

Now, if these are the likely surgical causes of hæmorrhage from the urinary tract, is it worth while leaving any of them? You may say cystitis may be left, If you can cure cystitis by any other means, by all means leave operation out, but we have seen that it is sometimes the cause of severe hæmorrhage. But that is the only one of our causes in which palliative treatment is any good in stopping the cause of the bleeding. And in regard to enlarged prostate, why defer operation until the patient is worn out with bleeding and retention of blood and urine.

It is absurd to even consider the question of putting off operation in connection with injury of the bladder. Unless you do something quickly, whether it is an intra- or an extra-peritoneal rupture, the patient will surely die.

With regard to calculus anywhere in the urinary tract, before the days of X-rays or of the cystoscope, Sir Henry Morris said, "If you suspect calculus of the kidney, cut down upon the kidney, and if the calculus is there, remove it."

Growths of the kidney can only be tackled with a chance of success early. Why then wait? Why hope that drugs will cure the hæmaturia?

Tubercle of the kidney cases are amongst the most disastrous. A boy comes having had a single attack of hæmorrhage. After rest in bed and palliative treatment he is considered cured. He returns six months later with tuberculous disease of the whole urinary tract. But if he had been examined at that first visit and the local lesion discovered, he could have been operated upon and the offending organs removed.

Therefore, I again ask you to bear in mind what I said at the beginning, do not attempt to regard hæmaturia as a disease, but as a symptom indicating disease of serious moment.

Guy's Hospital War Savings Association.

Dear Sir,

May we request that you will once again kindly draw the attention of your readers to the above Association, which was formed and affiliated with the National War Savings Committee on August 3rd, 1916.

Up to the present 426 members have joined the Association, and altogether 2,913 War Savings Certificates have been purchased. This result is surely satisfactory, but it is hoped that during the present campaign the members of the Association may render the Nation still greater service :—

1. By inducing their friends to join the Association.
2. By augmenting their weekly contributions towards the purchase of additional Certificates.

The Governors of the Hospital have already shown their approval of, and interest in, the Guy's Hospital War Savings Association by investing an amount in War Savings Certificates so that "pre-dated" Certificates might be purchased by members of the Association; but in order to stimulate members to do their utmost at the present time it has been suggested that prizes be offered to purchasers of War Savings Certificates during the months of December and January. Should any reader of the Gazette be willing to contribute to a Fund for this purpose, we shall be glad to receive their contributions, and subsequently to give them particulars of the scheme which the Committee of Guy's Hospital War Savings Association may adopt.

Yours faithfully,

The Editor, E. HUGGETT,
Guy's Hospital Gazette, *Hon. Sec.*
Guy's Hospital, W. J. CURRY,
S.E., 1. *Hon. Treas.*

Guy's Hospital Physiological Society.

A meeting of the Society was held on Wednesday, December 5th. Dr. Poulton took the chair, and Mr. G. Hume read a paper entitled "The Growth of Bone."

After a brief historical survey of the question, the labours of the pioneers of the subject were "potted" and given to the Society to digest. The author thus dealt with the work of Duhamel, Hunter, Flourens, Ollier, Barth, Axhausen, and MacEwen, giving some of their experiments and the conclusions to be drawn therefrom. He unfortunately made but little effort to correlate the many facts and theories with which the Society was bombarded, with the result that an atmosphere of repose and sleep clothed most of the members.

The discussion that followed fell below the high level usually attained by the Society notwithstanding the gallant effort of Mr. A. E. Sawday to discover the causes of the diminished curvature of the adult parietal bone as compared with that of the infant, a subject which Mr. Hume endeavoured to dispose of somewhat unsuccessfully.

The discussion finally collapsed when Mr. Massie inquired if anyone could tell him the relationship between proteosuria and the growth of bone?

Correspondence.

To the Editor of Guy's Hospital Gazette.

Dear Sir,—I would like to thank "L.E.S." for his explanation of the position of the tongue in cases of cerebral hæmorrhage, and would like to add that when the deviation of the tongue was noticed in this case the tongue was unprotruded and the muscles were flaccid.—I am, your faithfully, W. H. G.

At a Command Depôt.

Among the various posts I have held during the war not the least interesting has been some months spent at a Command Depôt. This may be described as a Military Restoration Camp or a training place for making convalescent sick and wounded soldiers fit for duty again. At first sight it has an unpleasant suggestion, this patching up the stricken to place them in a position to be possibly stricken again, but in these war days one has to harden one's heart to mere sentimentalities and think only of the necessities of the country at war. It cannot be said too often "The country wants all the men she can get." This is the *raison d'être* of the Command Depôt, and like that glittering word "efficiency" set before recruits, it is the watchword of the Staff.

The "sick parade" of the camp is at 7 o'clock. The patients are seen by the six M.O.s who have charge of the various "companies." Theoretically not many are expected, because the hospitals and convalescent camps are supposed to have brought them up to such a standard of health, that it only needs the special training to put a final finish to the restored article. But practically every man still considers himself more or less of an invalid, so "sick parade" becomes a close scrutiny for malingerers. After breakfast, the M.O.s again assemble at 9 o'clock and admit the newcomers. Here, again, they are taken in "companies." Every man has a "medical case sheet," to be filled up with full particulars of his disability, the hospitals in the United Kingdom he has been in, his present condition, the treatment he is to receive (if any), and finally the "Division" he is placed in. Here it might be well to remark that not all men received at a Command Depôt become fit for general service, but all derive benefit from the special treatments received, and from the physical training exercises. In regard to the latter, I formed a high opinion. This, to my mind, is the best of all treatment at a Command Depôt. I can only speak of my experience at one camp, where we had about three thousand soldiers constantly in training. The P.T. officer was an experienced and enthusiastic captain, and his staff of instructors, mainly from Aldershot, carried out their work in a most painstaking and efficient manner. Men were grouped in companies and graded in a measure according to their infirmities. For example, men over 40 were put together and their exercises were different to those of the younger and more robust. It was part of our duty as M.O.s to watch this training and see that men were not pressed to perform exercises beyond their physical capacity. I feel bound to say that the instructors were a patient and considerate body of men, and their own judgment in this respect seldom called for interference. All I have seen of physical training in the army has made a great impression upon me. Indeed, I am inclined to think that if physical training was part of every man's education, we could practically throw medicine to the dogs.

There are three "Divisions" or classes in a Command Depôt. Division I. contains men already fit for "general service," and those in this class are considered ready for overseas. Their training is completed. Very few men are placed in this division on arrival. Occasionally a fine specimen of a man completely recovered from some wound asks to be placed in it at once, in order to be back to the fighting line, and with the approval of the M.O. this is permitted. Division II. consists of two parts, "II.a" and "II.b." The average newcomer is placed in the latter on admission. In II.a, the higher class, the training is of a more strenuous kind, both in regard to physical exercises and route marches. In Division III. the less likely

for "general service" are placed for easy beneficial training, and those who, in the medical officer's judgment, should not have been sent to a Command Depôt at all. It is also a class in which a man from Division II.b can be placed for a rest. Once a fortnight each M.O. holds an inspection of his companies, taking a separate division each day. This is a somewhat laborious task, for he has to determine whether each man is to be moved up or down, or remain where he is. Also there is the question of sending him before a T.M.B. to determine his value by "category." The great object of all medical inspection in the army is to arrive at a "standard," and this must be sought by the observation of other men at work and by reference to the "M.O. in charge."

In addition to the physical training there are departments for massage, electrical, and hot air treatments, each under one of the M.O.s, who is supposed to be an expert.

An important feature of Command Depôt training is the route march as a test of fitness. In Division I. the distance men have to march is eight miles (it used to be twelve), and they have to complete three marches before being brought before the Commandant and M.O. in charge for passing into A1. In Division II.a a man has to do four miles, and that is now made a "depôt march" and not a company one, as formerly. That is to say, the whole of the men in the depôt in II.a are paraded and marched under officers, and a fall-out record and parade before M.O.s is made afterwards. When a man has completed three marches he is considered fit to move up to Division I. Division II.b does two to three miles at a very easy pace. Division III. has treatment, but little else to do. If a man is *put down* a division his former marches do not count if he is to be moved up again. The new arrangement makes it less possible for men to go through the divisions without doing P.T. or route marches, as was formerly only too frequent an occurrence. When a man has been in a Command Depôt for three months, he goes before a Travelling Medical Board, which sits once a month at the Depôt. A "T.M.B." may allow another month, but generally he leaves the Depôt after three months.

The *maximum* period in each division is:—

Division I....	...	3 weeks.
Division II.a	...	4 weeks.
Division II.b	...	8 weeks.
Division III.	...	Undetermined.

Looking back at the time I spent at the Command Depôt, I consider the work was distinctly interesting as an experience. As regards statistics, I regret I cannot give them here, as these are confidential; but I may say that they are sufficiently satisfactory, both as to the general improvement in health of the men under training and as to the "making of a man." The Command Depôt, as part of the great military machine, has stood its test and proved its worth.

FREDERIC VICARS,
November, 1917. Captain, R.A.M.C. (T.)

Chapel Notices.

On Christmas Day there will be Celebrations of the Holy Communion at 6, 7, and 8.45. The alms, as usual, will be given to the District Nurses' Maternity Samaritan Fund.

It is hoped that the Cathedral Choir will be able to sing some carols in the wards on Saturday afternoon, December 22nd.

Papers by Guy's Men.

F. N. Doubleday, M.R.C.S., L.R.C.P, L.D.S.: Cases of gunshot wounds of the jaw, with special reference to treatment.—*Proc. of the Roy. Soc. of Med.*, July, 1917.

W. Kelsey Fry, M.C., M.R.C.S., L.D.S.: A few notes on the treatment of gunshot wounds of the mandible and maxilla.—*Lancet*, Dec. 8th.

A Case of Gynæcological Inversion of the Uterus.

NELLY MACCARTHY, æt. 35, married, was admitted into Queen on April 30th, 1917, under Mr. Chapple, for dysmenorrhœa and uterine hæmorrhage. She had had eleven children, her last pregnancy being in May, 1915.

Patient's menstrual history was normal except for the four months preceding her admission. During this interval she complained of great pain during the periods, which simulated "labour pains," and of losing more blood than usual. Her last period began a fortnight before admission, and had never ceased.

On examination in the ward a good deal of œdema and excoriation of the vulva was found and there was slight hæmorrhage from the vagina, accompanied by an evil-smelling discharge. On passing the hand into the vagina a submucous fibroid could be felt passing through the external os.

On May 1st, 1917, patient was operated on by Mr. Chapple, and the following items were noted by the ward clerk:—"A large sloughing fibroid about the size of a cricket ball, attached to the *inverted* uterus, was found. The mass was torn away with the gloved hand with the slightest manipulation. The patient was then given a hot douche and much débris and blood were removed. The vagina was then packed with five or six rolls of gauze soaked in 3 per cent. iodine."

The patient made a good recovery, and as the hæmorrhage from the uterus had entirely ceased, she was discharged a fortnight later.

On August 8th, 1917, the patient reappeared at Gynæcological Out-Patients and complained that the hæmorrhage commenced again soon after she left the ward and had never entirely ceased. The patient was examined and the inverted uterus, red and congested, with pin-point hæmorrhages studded all over its fundus, could be clearly seen. The general appearance of the patient was poor; she was pale and anæmic, and on admittance into the ward her temperature was found to be 97·8° and her pulse 100. She was given a hot douche and the vagina again plugged; the hæmorrhage did not cease and her condition grew steadily worse.

On the 11th August an anæsthetic was given, and Mr. Marston thoroughly plugged the vagina, and her condition improved.

On the 17th August the patient's menstrual period commenced and she lost several ounces of blood; her pulse rose to 120 and her temperature remained sub-normal. Later the patient began to have fainting attacks and became very restless. The vagina was again plugged and the patient given small doses of morphia.

The period lasted four days, and after this her condition again improved. A few days later she was examined by Mr. Bellingham Smith, and he decided to remove the uterus.

On September 29th Mr. Bellingham Smith operated. The abdomen was opened in the middle line and the uterus found to be cup-shaped, the Fallopian tubes and ovaries having been dragged into the cavity of the cup. After tying off the broad and round ligaments with silk, the peritoneum covering the cervix and part of the bladder was reflected forwards. The uterine vessels were secured with silk ligatures at the level of the junction of the cervix with the body of the uterus, and artery forceps applied a short distance above the ligatures. The uterine wall was cut into between the ligature and the Spencer Wells until the cavity of the uterus was opened. This incision was extended anteriorly and posteriorly until the body was completely separated from the cervix. An attempt was

now made to lift up the uterus, but the invaginated portion would not pass the upper aperture of the cervix; the whole of the body of the uterus was therefore pushed through the cervix into the vagina, to be removed on completion of the abdominal operation.

The upper aperture of the cervix having been closed with interrupted catgut sutures, the peritoneal flap reflected from anterior wall of cervix was sewn to the peritoneum covering the posterior wall of the cervix, and the abdominal incision then closed in the usual way.

We desire to thank Mr. Bellingham Smith for permission to publish this case.

E. H. B.
J. V.

Seabrooke Memorial Fund.

Statement of Receipts and Payments.

RECEIPTS.	£	s.	d.
To Contributions from relatives and friends of the late Capt. Alec Seabrooke, R.A.M.C.	547	11	5
" Interest on Deposit at Bank	0	18	3
	£548	9	8

PAYMENTS.	£	s.	d.
By Donation to Guy's Hospital for the Endowment of a Cot bearing the following inscription:— ... ... "In Loving Memory of Captain Alec Seabrooke, R.A.M.C., Second Son of J. Seabrooke, Esq., The Elms, Grays, who died while serving his Country in Mesopotamia on July 1st, 1916, in his 32nd year. This Tablet and a Cot in Guy's Hospital were dedicated to his memory by his Relatives and Friends. He gave his strength to the Weak, His substance to the Poor, his skill to the Suffering, and his heart to God."	500	0	0
" Cost of White Marble Memorial Tablet with carved border and inscription incised and mounted on polished Marble Slab	30	0	0
" Legal charges in connection with fixing the above Memorial Tablet in Grays Parish Church	16	1	6
" Photographic reproduction of Tablet published in GUY'S HOSPITAL GAZETTE; cost of block; extra copies of GAZETTE; postages, etc.	2	8	2
	£548	9	8

Audited, compared with Vouchers, and found correct,
W. J. CURRY,
December 10th, 1917. Corporate Accountant.

Reviews, etc.

Books for review should be addressed to The Editor, Gazette Office, Guy's Hospital, S.E. Their price should in every case be stated.

Practical Points in the Diagnosis and Treatment of Heart Disease. By E. M. Brockbank, M.D., F.R.C.P. pp. 147. Price 5s. (Published by H. K. Lewis.)

The necessity of issuing a new edition of this book within a year of its last is sufficient proof of the popularity it has found among men beginning their clinical studies.

The work has been enlarged and a very useful chapter on General Physical Signs and Symptoms of Heart Disease added. Too often these are overlooked by the man who has just entered the ward and whose aim at the moment is the recognition of bruits of a particular character. While full details are given concerning the details of Cardiology, the author is to be congratulated for avoiding the pit-fall of neglecting the clinical side of the subject and of placing too great a reliance in the more modern electrical methods that have become available for the diagnosis of obscure cases.

The book may with advantage be consulted by the senior student who will find a reasonable and clear discussion on many ill-understood phenomena such as Hæmic Bruits. We recommend the book to all men, and believe that house-physicians will find the last two chapters dealing with Diet and Treatment particularly useful.

Elementary Hygiene for Nurses. By H. C. R. Darling, M.D., M.S., etc. pp. 152. Price 3s. (Published by J. & N. Churchill.)

This manual is an attempt to supply nurses who are about to take their final examination with the necessary knowledge demanded by the syllabus in the direction of preventative nursing. The amount of information conveyed in this small volume is enormous, but like many other attempts at rigid condensation it suffers from the defect of rendering the matter none too attractive. On the other hand it is difficult to see how this is to be avoided when the scope of the subjects considered is so boundless. The chapter dealing with Food is excellent, and may be trusted to fit the nurse with a suitable idea of the conservation of energy as applied to the human body. It is difficult to criticise certain other chapters of the book. The first chapter dealing with ventilation may certainly supply all the information expected from a candidate about to qualify, but whether all uninitiated readers will grasp the salient and essential factors underlying this aspect of hygiene from a perusal of the mass of details contained in this chapter is to be doubted. We sympathise with the author in the difficult task he has set himself and wish the book much success.

Appointments.

R.A.M.C.

To be Temp. Major.—Capt. E. R. Fothergill.

Temp. Lieuts. to be Temp. Capts.—G. Lewin, W. J. Smyth, J. A. C. Greene, M.C., G. H. Morris.

To be Temp. Lieuts.—H. J. Starling, R. Steel.

Territorial.

Major (Temp. Lieut.-Col.) F. J. Steward has relinquished his commission and is restored to the establishment.

Officers relinquishing their commissions.—Temp. Capts. R. N. Craig, C. E. Price.

Change of Address.

2nd Lieut. J. A. Currie, C Battery, 50th Brigade, R.F.A., B.E.F., France.

Capt. A. J. Gwatkin, R.A.M.C., from No. 10 C.C.S. to No. 39 C.C.S., B.E.F., Italy.

Temp. Surgeon F. C. Newman, H.M. Hospital Ship *China*, c/o G.P.O., London.

Capt. W. L. Gwyn Davies, R.A.M.C., 72nd General Hospital, B.E.F.

Lieut. A. D. Crofts, R.A.M.C., Cambridge Hospital, Aldershot.

Lieut. H. D. Wyatt, R.A.M.C., B.E.F., Egypt.

Capt. F. W. Morton Palmer, M.D., R.A.M.C., from 35th Field Ambulance, to 1st C.C.S., B.E.F.

Capt. B. R. Parmiter, M.B., B.S., R.A.M.C., from 32nd Field Ambulance, Salonica Forces, to 32nd Field Ambulance, Egyptian Expeditionary Force.

Lieut.-Col. R. Davies-Colley, R.A.M.C., Consulting Surgeon, Force D., Mesopotamia.

V. R. Dyke, Wytherstone, Brighton Road, Coulsdon.

Capt. A. Neville Cox, R.A.M.C., 103rd Field Ambulance, B.E.F., France.

C. John Henry, 78 & 79, King William Street, E.C. 4.

N. Mutch, M.D., M.R.C.P., 20, Manor House, Marylebone Road, W. 1.

Rugby Football.

GUY'S v. DULWICH COLLEGE.

A very strong cross-wind prevailed at Dulwich on Saturday, Dec. 1st, when the above match was played. We had a strong side out, but unfortunately after ten minutes' play Curle dislocated his shoulder badly and had to retire. F. W. Crook came out of the scrum to fill the vacancy. Our men were so much heavier than the College team that we were still able to control the scrums. But our ascendancy was by no means apparent until the College had scored an excellent try through Misselbrook. This Foulkes converted. The three-quarter play of the opposing side was excellent at this stage, but our weight soon began to tell and Morrison finished off some good work by scoring. Reitz made a fine attempt to goal, but just missed. Several chances came our way. It would have been better had Thomas given Duff more opportunity instead of trying the short punt so often. Bekker, after many attempts at boring through, at length scored, and with a really fine kick Reitz converted.

Ends were now changed, and immediately the game was resumed the ball went along to Duff; a return pass put Reitz in possession and a try resulted. After this the score rose rapidly and much of the passing was very good, though the threequarters have a tendency to pass "at the halt" instead of on the move. Bekker appears to stand too near the scrum. His line is not well away when they get the ball. The forwards played very well, better than hitherto, though one or two take it too easy in the scrum. Morrison was good. Richards all right in the open, but not strenuous in the tight. Cellier got the next try, he rushed the ball over with Richards' help. Crook was the next to cross the line. He dribbled through in fine style. From some excellent passing Duff scored the next try. Tonkin was responsible for next two tries. He ran well on both occasions, though the first time he was perilously near the touch-line. The last effort was goaled by Rose; it was a well-judged kick. The wind was most trying for place-kicking as Reitz had found. He took most of the other kicks, and each time the wind deflected the ball just wide of the posts. Duff came along with the last try of the match, it was rather far out and no conversion resulted. Thus the match ended with the score 2 goals 7 tries to 1 goal in our favour. Team:—

GUY'S.—S. Rose, K. L. Duff, G. McK. Thomas, C. L. Curle, B. M. Tonkin, W. H. Cellier, F. Bekker, F. W. Reitz, B. H. Laver, F. H. Crook, J. Vander Merwe, G. R. Aspinwall, H. J. Leviseur, P. J. Morrison, C, V. Richards.

Birth.

TICEHURST.—On the 3rd November, at 24, Pevensey Road, St. Leonards-on-Sea, the wife of Dr. Norman F. Ticehurst, of a son.

Deaths.

CLARKE.—Killed in action, on October 28th, 1917, Lieut. Paul Brooks Clarke, Canadian Pioneers, only son of Dr. and Mrs. W. F. Clarke, 2132, East Queen Street, Toronto, Canada, aged 21.

EDMOND.—Killed in action, on December 1st, John Adamson Edmond, Captain R.A.M.C., of 96, Bromley Road, Catford.

J. J.

GUY'S HOSPITAL GAZETTE.

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Passim.

IT is our pleasant duty to congratulate the "niggers" for the very excellent entertainment they gave in the various wards on Christmas Day. As usual, they began their round in Barnabas about the middle of the morning, and finished about 7 p.m. in Astley, after a strenous day. The singing of the Residents in their respective wards was much appreciated, but nowhere was greater appreciation shown than in Out-Patients, where the children joined the choruses. It is not our intention to deal with the programme in detail, but we should like to express our appreciation of the humour which covered its pages.

IN spite of the numerous restrictions that have come into force during the last year, it has been possible to hold the Landon Tea. Although certain modifications had to be introduced, the success of the tea did not suffer in any way. We feel sure that the energy of those, who took such infinite care in making the necessary arrangements was fully rewarded by the sight of 600 Borough children "feeding their faces." On behalf of the Treasurer of the Landon Tea Fund, we thank all Guy's men both past and present, who responded to the appeal issued in these columns with their usual liberality.

CONCERTS were held in the wards throughout Christmas week, and we give particulars of these on another page. Notwithstanding the keen competition of war hospitals to secure artists, we find that Guy's was not forgotten, and that a considerable number of outsiders were again found willing to assist our local talent.

WE publish in this issue a resumé of the work of the year in the various branches of medicine and surgery. We tender our thanks to the members of the staff, who have contributed these articles at a period when their time is so little their own. Advances are being made so rapidly in one or other department at the present time that it is practically impossible for men in the wards to keep themselves up to date with this rapid progress. It is hoped that these accounts, necessarily short, will supply a want and direct the reading of those, who seek the truth on any particular subject.

There seems to be an unnecessary amount of overlapping in the various departments, as a result of which a considerable amount of time is lost at Out-Patients. We can see no point in Junior Physicians giving specific treatment to their out-patients, when ideal arrangements exist for carrying this out in the newly added Venereal Department. One of the functions of Out-Patients is certainly to instruct men, but they are not likely to be encouraged to attend, when half an hour of the afternoon is devoted to a demonstration of how to administer a particular compound intravenously. We quite see the point that once a patient is transferred to another section, the physician is apt to lose sight of the case and has no knowledge of its progress. On the other hand, it would be easy to make arrangements for patients to be re-transferred after a sufficiently long period of special treatment.

In the last 2nd London examination many of the questions set in the anatomy paper were of a distinctly embryological nature. However interesting this part of the subject may be to people whose speciality it is to dabble in the development of the human body, it is doubtful whether such papers can be considered to accurately estimate the knowledge of candidates at the present time. Some two years ago there appeared in the *Lancet* a letter from a very old examiner, in which the attempt to increase the standard of the Fellowship papers, by introducing comparative and developmental anatomy was severely condemned. As the London is by no means an eliminative examination we should imagine the arguments used by the above writer apply with extra force. The practice of having both examiners professional anatomists may bring with it many advantages; for ourselves, we should like to see the paper moderated by a surgeon of practical experience.

The annual subscription of many of our readers falls due on January 1st. We enclose with this issue a bank order form for the annual subscription of 12s. 6d. for the Gazette and Reports. By filling in this form and returning it to the Manager, Guy's Hospital Gazette Office, readers can avoid the inconvenience of remitting small sums annually. A considerable number of complaints have been received from many of our readers, who have not received their Gazettes regularly. In the majority of cases they have failed to notify us of their change of address, so that many Gazettes remain undelivered. If readers would communicate any change of address when sending in their annual subscription, they will be saving our very limited staff a considerable amount of work, and make certain of receiving their Gazettes regularly.

We regret to state that Mr. Bromley has been invalided in Salonika, where he is in charge of a hospital. We understand that he has been operated upon successfully, and is now progressing very favourably.

Our heartiest congratulations to Mr. W. E. Tanner on his success in the M.S. examination.

Honours.

Bar to D.S.O.

Temp. Capt. (Temp. Lieut.-Col.) C. D. Pye-Smith, D.S.O., M.C.

M.C.

Temp. Capt. W. L. E. Reynolds, R.A.M.C.

M.M.

Corp. Chas. F. Hawkins.

Notes on some Ophthalmic Work during 1917.

By A. W. ORMOND.

Some considerable progress has been made in the improvement of plastic work by Major Gillies, who is confining his attention entirely to alleviating the distressing disfigurement left by many wounds of the face, and some of this work, of course, comes under the sphere of the ophthalmic surgeons.

Major Gillies has been very successful in elaborating practical methods to obtain skin grafts for making new eye lids, and in filling out the depressions which result from loss of bone in the region of the orbit; but what perhaps is of special interest to ophthalmic surgeons, is the use of cartilage placed within Tenon's capsule after the globe has been enucleated. The cartilage is obtained from one of the ribs, preferably the seventh, close to the sternum. A piece about the size of a large marble is inserted into the orbit, the recti muscles being sewn to the cartilage, thus obtaining a very mobile stump. The method is not new, as glass, filigree, and paraffin balls, etc., have been used at various times for effecting similar improvements. The advantage of cartilage, however, appears to be that it becomes organised with the rest of the tissues, and is retained as living tissue, so that the difficulties which have occurred with the other methods do not obtain with it; the chief difficulty of the use of the glass ball, for instance, being that it often travelled under the skin and had to be removed subsequently.

The main change that has been noticeable in our work at the 2nd London General Hospital, is in the extension of the classes of case sent to us, and of my 300 beds, a fair proportion of them are occupied by patients, showing the result of injuries to the orbit, involving the frontal bones, and very often the frontal lobe of the brain. These cases are not genuinely ophthalmic, but owing to the men being blinded by the injury, they are evacuated to an ophthalmic centre! On the whole, considering the severity of the injuries, these men have done very well. The mortality has been low, although in many instances the brain tissue itself has been actually found protruding at the bottom of the wound. The main principle of the treatment seems to be to effect, as far as possible, a satisfactory drainage; the entrance and exit wounds are often extremely small and insignificant, but when an examination and an exploration of the deeper part of the wound is made under an anæsthetic, a comminution of large areas of bone is frequently found; also in many cases large pieces of metal have traversed one orbit, the nasal cavities, and are found lodged at the back of the other orbit. These wounds are opened up extensively and good drainage obtained. The dressings are changed every few hours, and the success which so frequently results, is no doubt due to the careful nursing that all these serious cases have received by the sisters and nurses of my wards. One is more and more convinced of the importance of careful nursing in these injuries of the head, as the surgeon is very often unable to effect a very satisfactory condition of the wound owing to the septic condition in which they arrive, and frequent dressings and irrigations are necessary. This must be carried out by fully trained nurses, who realise the importance of their work.

We have a large number of burns and injuries, the result of "mustard" gas, and, in my experience, no permanent lesion has resulted so long as the actual liquid has not been allowed to penetrate the tissues, that is to say, where the patient has been under the influence of the gas, the recovery is always complete; a few cases have been sent in however, where, owing to the bursting of a gas shell, actual liquid has reached the skin and the tissues of the eye, and

in that case the injury is often permanent; fortunately, these instances are not many. I find that washing the tissues with an alkaline solution, or sterilised normal saline is most soothing in the early stages and also protection of the eyes by dark glasses. Later on, Zinc antiseptic drops are very useful but the patients must not be allowed to yield to the very natural desire to keep the eyes closed owing to the photophobia, but should be encouraged to persevere in exposing their eyes to stronger and stronger degrees of light daily, otherwise, they are liable to degenerate into that distressing condition in which a man with good vision cannot be persuaded to open his eyes normally under any circumstances, even for months or years after being gassed.

A very useful piece of work made possible by the war has been carried out by Dr. Gordon Holmes in reference to the representation of the macula.

Dr. Holmes has made two very interesting communications to the Ophthalmic Section of of the Royal Society of Medicine, as a result of a study of a very large number of cases in which vision was affected by a lesion of various portions of the optical system. Most of the cases were due to penetrating and perforating wounds of the cranium by rifle bullets, shell fragments and shrapnel, as well as local concussions and compressed fractures, the injuries being, of course, in the neighbourhood of the Inion over the occipital lobe. Dr. Gordon Holmes' conclusions are as follows:—

1. The upper half of each retina is represented in the dorsal, and the lower in the ventral part of each visual area.

2. The centre for macular or central vision, lies in the posterior extremities of the visual areas, probably on the margins and the lateral surfaces of the occipital poles.

3. That portion of each upper quadrant of the retina in the immediate neighbourhood of, and including the adjacent part of the fovea centralis is represented in the upper and posterior part of the visual area in the hemisphere of the same side, and vice versa.

4. The centre for vision subserved by the periphery of the retinæ is probably situated in the anterior end of the visual area and the serial concentric zones of the retina from the macula to the periphery are probably represented in this order from behind forwards in the visual area.

The visual area is taken as being that area of the occipital lobe which coincides with the cortical zone of special structure known as the Zona Striata, which is distinguished by Gennari's line which lies within and on both lips of the calcarine fissure, and extends to and around the pole of the occipital lobe.

Another valuable piece of work, but not relating to the war, has been carried out by Mr. Bardsley, and published in the British Journal of Ophthalmology in April last.

Mr. Bardsley has made some very important observations on the condition of the blood vessels in the eye as the result of increased blood pressure. This is of special interest in medical work.

Mr. Bardsley thinks that in simple high tension without any signs of angio-sclerosis—

1. The vessels have an appearance of *uniform* distension and fullness.

2. The light streak is *broadened* out; it may be greatly increased, apparently reaching almost the whole breadth of the vessel.

3. The light streak is very much brighter than normal, the brilliancy increasing with the increase of the tension, until with very high tension it becomes like bright copper wire (not silver wire).

4. The tight arteries indent the veins; with medium high tension they indent them slightly,

with very high tension they indent them deeply, leading to back pressure and all its consequences.

The following signs indicate sclerosis :—

1. *Irregular* tortuosity, especially of the smaller twigs.

2. Increased brilliancy of the light streak, while at the same time the light streak appears *narrower* and more central.

3. Irregularity of calibre and beading are sure indications of sclerosis.

4. General diminution in the size of the vessels and "silver wire" reflex show advanced sclerosis.

After three years' experience it would perhaps be useful to record what has been accomplished by the use of spectacles amongst soldiers. As this is the first war in which our army has been provided with spectacles, and as a very great deal of time and money has been spent and an elaborate organisation set in order to accomplish this, it is interesting to consider what may be said to be the results of this care, trouble and expense.

It is impossible, at the present time, to obtain definite statistics of the number of men in the front line trenches who are wearing glasses, and it is probable that if they could be obtained the information would be a great disappointment to a large number of ophthalmic surgeons who have expended so much care and trouble in fitting men with spectacles. I doubt very much whether more than 1 per cent. of men in the front line trenches will be found to be wearing glasses. This does not, however, prove that the army authorities were wrong in yielding to the demand that soldiers should be made efficient for military service by means of spectacles, because, in all probability, the value of the work would be manifest, not amongst the combatants, but amongst the vast army of men, mainly non-combatants, who have been rendered efficient for administrative work behind the lines.

I think it must be clearly emphasised that the contention that has been made by the Army Authorities, that glasses are liable to be extremely unsatisfactory to men in the field, has been proved.

In a War Office letter by Sir Alfred Keogh, of June, 1916, it was pointed out that glasses had been given to soldiers who made no use of them, and that the conclusion arrived at by the Ophthalmic Surgeons in France was, that a soldier would not wear glasses unless the benefit which accrued from their use was very obvious and apparent to himself, and therefore the ophthalmic surgeon was advised not to order glasses unless they were absolutely necessary, because of the soldier's inability to clean or to dry his spectacles in the mud and wet. Since that letter was written, another factor has arisen which seems to me to still further prove that combatants should, under no circumstances, be ordered glasses unless there is an obvious necessity, and that is, that all combatants, and also a large number of non-combatants, who are working close up to the lines have frequently to wear gas masks, which have often to be put on hurriedly, and in conditions of great emergency. A certain amount of warm moist air escaping into the interior of the mask results in the mica disc becoming cloudy, owing to moisture condensing on its surface, and it requires special precautions for this to be dealt with. These precautions are not entirely satisfactory.

If, in addition, a man is wearing spectacles the same condition would also occur on the glass, and if he has ear pieces attached to the spectacles, there is, in addition, a certain risk of some of the gas outside penetrating into the interior of the mask, along the channels which are necessarily left open by the wires of the ear pieces The man, therefore, has a double

disability, the spectacles decreasing his vision and rendering the gas mask more liable to leak. On the other hand, although not many men wear glasses in the actual firing line, spectacles have undoubtedly been helpful to these same men during their period of training. To learn to shoot and to strike a target at a varying number of yards away, necessitates in many cases the employment of glasses, in order to enable the recruit to see the mark at all, and it would be impossible for Myopes to carry out a course of musketry without artificial aid. In practice, however, especially in modern trench warfare, the private soldier is not often obliged to fire at or hit any such minute object as a target at 1,000 yards, but fires in a given direction, and with a rifle "sighted" for a given distance.

I would urge:—

1. That glasses should never be ordered for combatant soldiers except for the one purpose of making an inefficient man efficient, or raising him from one category to another.

2. If a man has 6/12 vision without glasses, he should not be given glasses to increase his visual acuity to 6/9 or 6/6.

3. If the soldier is unwilling to wear glasses (and you cannot convert him from his unwillingness), it is practically useless to try to enforce his doing so.

Amongst the vast numbers of soldiers and civilians now doing clerical work of a continuous and arduous character, the need of wearing glasses has been abundantly increased, and the main value of the use of spectacles has accrued to this class of workers. Multitudes of men and women who only used their eyes for close work for a short time each day, are now busy writing, typing, reading or supervising for ten, twelve, or even more hours each day, and their work would be in many instances, quite impossible if they could not receive the assistance that glasses have the power of giving them.

The Military Ophthalmic work at Chelsea has been, during the year, most abundant and varied. It has included a large proportion of severe cases of extreme interest, in fact, one may say that no sphere of work has been unrepresented although most of the work is traumatic in origin.

I have had the good fortune to have as my colleagues: Captains Harry Lee and H. C. Rook, both Guy's men, who, previous to the war, worked with me in the Ophthalmic Department and to whom I am sincerely indebted for their loyal co-operation and assistance, as well as to Captain Wallace, who has charge of the whole Out-patient work, now that it has grown so large.

Pass List.

University of Oxford.

Final Examination.

At the Examination for the degree of Bachelor of Medicine held recently, the following candidates were successful in the subjects indicated:—

Forensic Medicine and Public Health.—C. W. W. Armstrong, W. Gover, R. T. F. D. Roberts.

Medicine, Surgery, Midwifery.—C. W. W. Armstrong, W. Gover, R. T. F. D, Roberts.

University of London.

At the Examinations for Medical Degrees held this month the following candidates were successful:—

First Examination.

R. Brooke, A. R. V. Patel, C. L. T. Smith.

Second Examination.

Part I.—G. E. W. Felce, E. C. Grey, B. Kessel, W. H. Summerskill.

Part II.—E. E. D. Gray, E. C. Grey.

M.D. Examination.

Branch V., State Medicine.—Philip Smith, B.S.

M.S. Examination.

Branch I., Surgery.—William E. Tanner.

Orthopædic Surgery during the last twelve months.

By W. H. TRETHOWAN.

The development of this branch of surgery in the past year has principally been seen in the increased application of its fundamental principles to the needs of military cases. Into the numerous Military Orthopædic Hospitals established under the directorship of Sir Robert Jones are being received all the late results of injuries to the limbs, spine, and locomotor apparatus generally. These special hospitals have now been founded in many of the bigger provincial towns, and are being furnished with facilities for every possible form of treatment that assists restoration of function. In the general scheme of treatment mechanical measures or open surgical operations are adopted in any particular case with due regard to what gives the earliest and the best functional result. Cases are admitted to the Military Orthopædic Hospitals usually after an interval of some months from the original injury. By that time the wounds are in most cases healed, excepting those of bone necrosis with sinuses. Many of the leg cases are unable to walk, or are going about on crutches. In the majority the length of stay in the Orthopædic Hospital is protracted, as they are retained as long as there is any advantage to be gained from any further treatment whatever. Most of the cases sent are mal-united or ununited fractures, with every possible variety of damage to soft parts; necrosis cases with sinuses and sequestra; vicious union in the forearm; joints in various degrees of deformity and anchylosis, or with undue mobility; peripheral nerves with complete or incomplete division, and accompanying paralyses, sensory or trophic affections; lesions of the soft parts, scars adherent to tendons and muscles, with varying degrees of loss of the latter; various kinds of peripheral functional conditions or neuroses are met accompanying some underlying organic defect; finally, amputation stumps are admitted (before passing on to the special institutions for supplying artificial limbs), to have the sinuses healed and sequestra removed, deformities corrected, painful nerve bulbs excised, and to be re-amputated if conical.

The object of Orthopædic treatment is the attainment of a good functional result, and as the cases are retained so long in hospital, profitable evidence is gleaned as to the relative value of different methods of treatment. Later on, statistics now being collected will enable more definite plans of treatment to be formulated which will be particularly useful, for example, in the surgery of peripheral nerves. In Orthopædics there is no distinction between "treatment" and "after-treatment," and open operation is merely one of the many methods to be used when and where in the scheme of treatment it is indicated, and its efficacy greatest. For example, tendons adherent to a scar may require weeks of mechanical treatment before an open operation can be of any service. The principal methods in use are: all kinds of mechanical splints and appliances, from the simple ones of the Thomas–Jones school to the most complicated leather splints, made on plaster models, as used on the Continent; massage, passive movements simple active movements and resistive exercises, industrial exercises in workshops, and general gymnastic training and games, for example basket-ball; electricity, both Faradic and Galvanic; baths (aeration, whirl and contrast), and open surgical operations. Many temporary splints are made of plaster of Paris. These serve for such purposes as the gradual correction of deformity under pressure; to permit ambulation while parts are stretching; and to tide over the interval while the permanent appliance is being made. Massage is applied

for the softening of scars, the removal of infiltration and œdema, the nutrition of muscles, and the restoration of mobility of joints. Electricity is used not as electricity, but as a means of making the muscles work, aiding their nutrition and providing the lightest forms of semi-active exercise. Wherever the nerves and muscles respond to it, Faradism is used, but earlier than this, after nerve suture, galvanism is employed. The majority of cases require either massage or electrical treatment, and in all of these treatment is preceded by heat applied by means of one or other kind of bath. It is held generally that the virtue of the bath is in its heat, but ergographic tracings have shown that the muscles have a greater capacity for work when treated in the aerated water bath than in the whirl bath, or than when treated by mere massage alone or by the hot air bath and massage. The limb is immersed in the aeration bath for ten minutes at a temperature of 110-112 degrees, or for twenty minutes at 105. While immersed gentle passive movements of the joints are carried out, and such active movements as are possible.

In lesions of the bones themselves we meet many cases of mal- and non-union of fractures. The application of any method of method of treatment is carried out with very careful regard for the possibility of recrudescing sepsis. Long after the external wound has healed the infecting organisms remain alive in the centre of the scar. Before any operation on the bone itself is done, it is now usual to excise the scar and reconstruct the soft parts a few weeks before rectifying the bony lesion at a secondary operation. The primary operation will also be of a provocative nature, for if sepsis is to recur it will do so then,and with much less harm than if it occur at the secondary bone section. Mere angulation, even when there is a discharging sinus, can often be rectified by manual osteoclasis, with subsequent fixation in plaster or in the ambulatory Thomas "Calliper" splint. Union with overlapping may often only safely be treated by simple osteotomy followed by traction extension. The Plating of fractures is a method of exceedingly limited use in war surgery, however keen one may be on its advantages in civil work. Injudicious employment of this method and its use by surgeons unskilled in its technique have brought an undeserved discredit on an important branch of the work. In cases of fracture due to gunshot wound which have been healed for over 12 or 18 months the sepsis has been known to light up, even when the operation has been done with the greatest care. The extensive wound and dissection necessary in the operation of plating violates the general principle of doing little in a case where sepsis has formerly existed. For ununited fractures with considerable loss of bony substance, and in flail joints that can be immobilized surgically, bone-grafting with an autogenous graft is a method of wider application than the use of metal plates. The same objection as to dissection holds also in these cases, but there is no doubt that sepsis is not so liable to recur in bone grafting as in bone plating. The graft is either slid from the longer fragment or cut from another bone, such as the tibia. Fixation is usually by kangaroo tendon.

The numerous cases of bone necrosis with sinus formation are now being treated with great success by the removal of sequestra, and the application of Rutherford Morrison's bismuth and iodoform paste (B.I.P. bismuth subnit. one part, iodoform two parts, soft paraffin q.s.) The indications for operation are the presence of a loose sequestrum which cannot otherwise be removed, or a persistent sinus. The cavity is converted by chiselling away the walls of the involucrum from a bottle shape to an inverted pyramid, that is, throwing the central cavity widely open towards the surface. All recesses are explored and as far as possible thrown into the

main cavity, sequestra being removed and unhealthy granulations curetted away. Next the cavity is vigorously swabbed out with methylated spirit, and then the paste is well rubbed into the walls of the wound and cavity by means of a gauze swab, with care to avoid leaving lumps of the paste in the wound. The bone cavity is filled by a piece of adjoining muscle, stitched in if necessary, and the wound then closed up with silk-worm gut sutures, a small drainage tube being inserted as far as the muscle. The tube may be removed in 48 hours, and in many cases the condition is quite healed in a couple of weeks. Filling the bone cavity with soft tissue prevents the interminable drainage from the central bone cavity.

In the treatment of stiff or deformed joints four methods are available; (1) gradual movement, by daily massage and passive movements without anæsthesia, followed by exercises; (2) forcible movement under an anæsthetic followed by an immediate functional exercise; (3) gradual correction by plaster or rack splints; (4) excision by surgical operation. The first indication is to bring the joint into its most useful position, or restore such range as it possesses to that position in which it is of most value; in other words, correct the position first and restore what mobility you can while keeping the position correct. Forcible movement through excessive ranges is not a widely indicated method, as the tearing of scars leads to great reaction, and ultimate increase in stiffness. A much more useful method is to increase the range by a few degrees under anæsthesia, followed by daily massage and movements, and repeating this small manipulation under an anæsthetic at intervals of ten or fourteen days. Reaction is thereby reduced to a minimum. Where tissues are too tight, or where tearing would be dangerous, it is better to force the joint as far as it will safely go under anæsthesia, and there fix it for a time in plaster. Repeat this at intervals if necessary. Contracted soft tissues are thereby lengthened without tearing. The operations of excision and arthroplasty are rarely indicated in military cases, if the man has subsequently to earn his living by manual labour. It is now only applied in cases of the shoulder and elbow, and very rarely in these. In the shoulder the use of the abduction splint in keeping the upper arm at right angles to the body for a few weeks is of considerable service in stretching all the soft tissues on the adductor side. There are many cases of impaired motion of the forearm, hand and fingers. The most generally useful method here is firstly and most essentially the dorsiflexion of the wrist, best retained in this position by some simple, easily removable wire splint, which is of little bulk in the hand itself and enables the fingers to be used more than is the case with the ordinary "cock-up" splint. When the wrist is up half the difficulty with the stiff fingers naturally disappears. To aid their flexion a glove may be worn with tapes attached to its fingers. These may then be held bent as far as comfort will allow by attaching the other ends of the tapes to the upper end of the wire wrist splint. Splint and glove may be removed daily for other treatment, and for periods of functional use. Speaking generally, all splints should be removable rather than fixed, should be jointed, and permanent apparatus should have elastic or spiral spring traction rather than rack joints. In losses of muscle and tendon substance in forearm cases transplantations of flexor tendons into the extensors have led to extremely good results. As a general principle mobility must be restored and deformity corrected before tendon grafting is done. In cases of undue mobility of joints following loss of substance due to the original wound or to resection for sepsis the treatment usually adopted is an appliance, jointed or not as practicable. The fear of recurring sepsis will often prevent for some time the application of the method of bone-grafting.

Scars deeply adherent and restricting the motion of the underlying parts may be excised, with such reconstitution of the muscles as is possible. A partially detached muscle, for example the deltoid, can be re-attached. Excision of scar may be necessary on account of pain due to the involvement of nerve ends. A small scar may be the sole organic cause of a considerable functional disability. In addition to limitation of movement from functional causes and scars, there occur many cases of postural fixation of peripheral joints due to some more distant lesion. These are best treated by methods of gradual stretching.

Many cases of injury to peripheral nerves are met, requiring investigation and suture. With the varying paralyses are found various sensory and trophic changes. The nerves most commonly injured are: musculo-spiral, median, ulnar, sciatic and external popliteal injuries. The suspected nerve and its related muscles are tested electrically and the sensory changes mapped out before exploration. On cutting down, the nerve is first discovered above and below the seat of injury, and then traced into the scar. Various conditions may be met. In complete division there is usually a considerable bulb, a "neuroma" on the proximal end, and sometimes a lesser one, a "glioma," on the lower end. The ends are resected until the fibrous tissue is removed, and are then brought together with interrupted silk or cat-gut sutures through the sheath. The scar around is removed, and the nerve buried in healthy tissue. Often the defect in the nerve is partial. The scarred piece is then removed by partial resection, or the nerve merely slit in several places along its length. In irritative lesions with much pain, often very little is found other than adhesions of the nerve sheath to other tissues, or some fibrous infiltration of the nerve substance. Adhesions should be removed, or the sheath slit up, or the capsule stripped.

In all cases of incomplete anatomical lesion the exposed nerve should be tested at the time of operation, both above and below the lesion, by the sterilized Faradic terminal. The degree of resection or not is determined on the result of this examination. In cases of complete resection where there is difficulty in bringing the ends together, it may be necessary to relax the parts by, the flexion of joints, displacement or dissection of the nerve, with due regard for its the branches. There must be no tension on the nerve suture. Where approximation of the nerve ends is impossible recourse may be had to the grafting in of a piece of one of the sensory nerves. Some but no great success has attended this method. No other sort of bridge of the gap appears to be of any use. In other cases where approximation is impossible, or in cases where even with suture the function of the nerve will ultimately be bad, it is better to do a tendon transplantation or a tendon fixation. Recovery of function after secondary suture is a very slow and lengthy process. The reaction to Faradism appears some weeks or months before voluntary power. Reaction to Faradism may not occur for a year or two, and rarely ever before the ninth or tenth month. It is said that absolute restoration of function, that is as good as the original, rarely if ever occurs. After the operation the paralysed limb must be kept warm, treated daily with galvanism until the Faradic response appears, and then with both Faradism and Galvanism until voluntary power is manifest. During the whole time the paralysed muscles must be supported by splints to prevent fatigue and over-stretching. An extremely useful book on the war wounds of peripheral nerves has recently been written by Tinel. It comprises the work carried out under the care of Dejerine, and being available in English is of great value to anyone interested in nerve surgery.

Another extremely useful and valuable little book is that issued for official use by the War

Office, price 2d.; it contains the conclusions adopted by the Inter-Allied Surgical Conference held in Paris, March and May, 1917. It is entitled "General principles guiding the treatment of wounds of war."

The Genito-Urinary Department.

By A. R. THOMPSON.

This special department has kept up its numbers, in spite of the war, and the fact that some of the syphilitic and a few of the gonorrhœal patients have been transferred to the evening venereal clinic.

For the treatment of gonorrhœal patients, a special couch has been made by Mr. Saltmarsh, for the purposes of irrigation. It is found that patients can automatically irrigate themselves, and thus save much trouble to the dressers in this department—when a sufficient number of cases have been collected, it is proposed to give a brief record of the treatment and apparatus which is used in the department.

Special papers of appointment for cystoscopy are issued to the appropriate patients, and in many cases diagnosis of bladder conditions is made by means of the cystoscope, before the patient is admitted. Work is being done in connection with normal and abnormal bladder pressure, and with bladder failure, and it is hoped that here also brief records may be forthcoming.

Several cases of growth of the bladder have been operated upon in the ward, and have done fairly well after operation. The spontaneous disappearance of an apparent sarcoma of the pelvic cellular tissue in the region of the prostate, after a suprapubic cystotomy remains to be explained, as the patient is not only alive but has gone back to his work, having put on two stone in weight. At the time of operation the supposed malignant growth was considered not to be capable of removal, but six months after operation it had completely disappeared.

Stricture cases attend most regularly not so much to have their strictures re-dilated after a long absence, as to have the strictures kept dilated. A very slight diminution in the strength of the stream of urine is quite sufficient to warn patients, nowadays, that a regular course of catherisation is essential to their well-being.

Cases in the medical wards of a urinary nature, amenable to surgical interference, especially in women, have been fairly numerous, and I should like to thank my medical colleagues for their kindness in allowing me to operate upon such cases in their wards.

Cases of vesical calculus during the past year have been very uncommon; but a case of imparted urethral calculus, in an elderly adult male, which was removed with sinus forceps, under ether, deserves mention.

Cases of movable kidney occurring in male subjects have not been uncommon; the outstanding feature among the recognised symptoms is hæmaturia, which is not cured even by prolonged rest in bed, but disappears altogether within a week of fixation of the kidney to the posterior abdominal wall, by Guyon's method.

I desire to thank the nursing staff, house-surgeons and dressers, in the department, who have frequently had most trying cases under their care.

Roll of Honour.

Wounded.

Lieut.-Col. L. D. B. Cogan, M.C., R.A.M.C.
Pte. C. H. Kidner, Artists' Rifles.

Casualties amongst the Sons of Guy's Men.

Lieut. C. Morse, R.E.

Notes on Ear, Nose and Throat Work during the Year.

BY W. M. MOLLISON.

DURING the past year one of the most important pieces of work has been the decision of the Otological Section of the Royal Society of Medicine to draw up a standardised plan for testing the function of the auditory nerve. Till now observers have used various schemes, all most illuminating to themselves but more or less incomprehensible to those who tried to interpret them, and it was felt that, for published cases at least, some standard tests should be adhered to, so that all otologists reading the accounts could visualise the case clinically. The following scheme was adopted by the Otological Section; very naturally the tests suggested are those that the Section hopes will be used, but they do not for a moment exclude other tests which are used by various observers, or new tests that may be devised.

The difficulty of standardizing the tests for hearing was recognized as very great, but it was decided that greater detail of the tests for hearing used should be given in reports of cases.

A scheme was drawn up as follows:—

CONVERSATIONAL VOICE.

Single words or sentences with opposite ear closed.

Distance from ear expressed as a fraction with distance at which voice is heard from normal ear as denominator.

WHISPER.

Conditions as above, but whisper produced by residual air after forced expiration.

It is recognized that the voice tests are approximate only, as it is impossible to devise an exact standard. The words or phrases used to be recorded when possible.

WATCH OR POLITZER'S ACOUMETER.

Distance from ear expressed as a fraction, with distance at which watch is heard by a normal ear as denominator. The acoumeter should be held strictly vertically.

TUNING FORK TESTS.

Lateralizing Test (Weber's).

Base of vibrating fork to be firmly pressed on mid-line of forehead and patient asked on which side it is more distinctly heard.

Relative Bone and Air Conductor (Rinné).

The vibrating fork is alternately pressed firmly on the mastoid, and held with limbs vertical and vibrating in coronal plane close to the meatus, the position in which the tone is heard longer being noted.

Absolute Bone Conduction (Schwabach and Bing's Tests).

In these tests the perception of a tuning fork pressed on the mastoid of a patient and of a normal observer is compared—(1) with the meatus open (Schwabach), or (2) with the meatus closed lightly by the finger (Bing). The difference of the duration of perception expressed in seconds between the ears of observer and patient is noted.

Tone Range.

1. (*a*) Upper limit of air conduction by Edelmann-Galton whistle or steel monochord (gauge of wire to be stated). (*b*) Upper limit of bone conduction by steel monochord.

2. Lower limit of air and bone conduction by tuning forks.

In all tuning fork tests the number of vibrations per second, and whether single or double, and the make of fork to be stated in each case.

The Royal Society of Medicine kindly allowed the scheme to be published.

The possibility of standardizing the testing of the vestibular function was considered, but the difficulties of drawing up a standard scheme here were recognized as being too great for the present.

These standard tests have an important bearing on the various war deafnesses, especially in reference to pension cases. On admission to the Army, a man may have some degree of deafness; on discharge, he may claim to have become more deaf as the result of service: unless the Examiner for pensions can compare his results with those of the doctor who admitted him, it is impossible to assess the damage. Tests carried out according to the above scheme would be of great assistance.

Among the cases that have passed through the Ear and Throat department have been a few of outstanding interest, but apart from them it is difficult to mention anything that indicates progress, or anything that is of much general interest.

There was one case of acute spreading osteomyelitis of the frontal bone secondary to frontal sinus suppuration, that recovered after operation; this case has already been published in the Gazette.

There has been a case of suppurative meningitis secondary to operation for suppuration in the frontal sinus; the meningitis appeared to originate in a septic thrombosis of the small vein in which the superior longitudinal sinus begins; the meningitis lasted fourteen days, and after operation and frequent lumbar punctures complete recovery took place. The cerebro-spinal fluid was cloudy for fourteen days, it contained numberless leucocytes but never micro-organisms.

There have been other cases of meningitis as a result of middle ear suppuration or its complications, but unfortunately they did not all survive.

The treatment of meningitis is far from satisfactory; drainage of the subdural space is the object to be aimed at, but the best method of arriving at that end is not yet decided upon; some advise drainage through the internal auditory meatus, some through the meninges of the posterior or middle fossæ, and others by lumbar puncture, continuous or repeated. The last method is far the simplest and has been used with success in the wards during the year: the puncture is carried out as usual and the needle left in position, the patient's mattresses being arranged so that the needle is not interfered with. By this means drainage can be maintained for twenty-four hours or more.

Functional deafness has taken a somewhat prominent place: it has been found to be fairly common and many cases which had been discharged from the Army as deaf, have been found subsequently to be made to hear by various forms of suggestion. The suggestion has in some cases to be emphasised by the administration of an anæsthetic and the making of a post-aural incision as recounted by Major Hurst and Captain Peters. In some cases of deafness stimulation of the vestibular nerve restores hearing; the ear is syringed with cold water till the patient becomes very vertiginous, and then a speaking tube is used for shouting phrases or commands to the patient.

One such case was seen in the Out-Patient department: a girl was injured in an air raid, she sustained a severe cut on the right side of her face and laceration of the right external auditory meatus; these healed, but she remained deaf in the right ear though the drum was normal. She was told that after her ear was syringed she would be able to hear; cold water was then syringed into the right ear till she was giddy and exhibited the usual contra-lateral rotatory nystagmus; before syringing she could not hear spoken words close to her

ear, after, she heard a whisper at a distance of eight feet.

This treatment is not always successful, because there seem to be cases where the cochlea is irreparably damaged while the vestibular apparatus is still able to be stimulated.

Some pathological work on war-injured ears has been done, notably by Dr. Fraser of Edinburgh; his papers were published in *The Journal of Laryngology*, illustrated very fully by microphotographs.

In the review of Ear and Throat work last year it was noted that the men blinded in the war were very apt to suffer from suppuration in the accessory air sinuses; during 1917 this fact has been emphasised. Many of the men from St. Dunstan's have been operated upon for frontal sinus and antral suppuration.

One point of practical interest in connection with the frequently performed operation of submucous resection of the nasal septum may be mentioned. After removing the cartilage and as much bone as is needed, small pieces of cartilage are replaced between the muco-perichondrial flaps so as to stiffen the new septum. This procedure has certainly led to better results than was formerly the case; it does away almost entirely with the "flapping" septum.

No sketch of Nasal work for 1917 would be complete that did not draw attention to the excellent plastic work of Major Gillies, Captain Aylard, and Lieut. Seccombe Hett; these surgeons have exercised great ingenuity in using cartilage brought from ribs, skin flaps from forehead and chest, and the turbinal bones to reconstruct noses for those disfigured by wounds.

THE EDITOR will, at all times, be glad to consider Articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. The payment that the Gazette *can offer is merely nominal. Authors who desire reprints of their papers should make their own arrangements with the printers when they return their proofs. All contributions to be addressed to the Editor, "Guy's Hospital Gazette." Guy's Hospital, London, S.E.*

Ward Concerts.

ADDISON.

Addison held its concert early on Friday afternoon, and in spite of other concerts then in progress a large number of visitors were present. The first thing that attracted the eye were the decorations, which surpassed anything seen in the Hospital during this Christmas. The nurses are to complimented for this, as well as for the very cunning manner in which they placed their most comfortable chairs below an abundance of mistletoe. A feature of the excellent tea served was the amount of loaf sugar to be seen—it made one feel that Addison knew about the sugar scarcity long before the general public did. The concert itself was of a high standard, but as most of the artists appeared in other wards and have been commented upon, there is no point in describing the programme in detail. At the end of a thoroughly enjoyable afternoon, it was found that no one could play "God Save the King"; eventually a Sister overcame her natural shyness and put up a very laudable performance.

BARNABAS.

A most enjoyable concert took place in Eyes on Boxing Day. Sister is to be congratulated on the very novel decorations that reminded one of a harvest festival—poppies peeping through a profusion of corn, or was it straw? Tea was provided during the interval, and should compulsory rationing come into force during the next year, all those present will be able to call to mind their last good tea served in Barnabas.

Among the artists a considerable number were endemic to the ward, and this factor contributed largely to the success of the programme, for there is something peculiarly attractive in our local talent. A talented septette gave the company song and dance, and Mr. Austen amused the younger members of the audience with his conjuring. The topical verses of Messrs. Coombs and Forbes were much appreciated, even though the rapidity with which these were sung was alarming. The more serious side of art was represented by the instrumental performances of Messrs. Kerby, Fairne, Kendall and Bonar. Mr. Woodruff was at his best, and although he introduced one or two little chestnuts, he did this with so great a charm that even the carping critic forgave him. The "Vicar" and "Charles" appeared singly and in combination, and contributed towards an entertainment which, if anything, was somewhat too long.

CLINICAL.

The concert held in Clinical on Thursday was much appreciated by patients and visitors. Mr. Foxon is to be congratulated on the excellent entertainment he arranged, and our best thanks are due to his party. Miss Venables was to have given us one or two songs, but by the time she replied to her numerous encores she had given us a considerable number. Clinical was not forgotten by its old medical ward clerks, Mr. Woodruffe and Mr. Laver giving a very pleasing duet. The College Sextette were at their best; their voices harmonised very well in spite of the volume of Mr. Doyle's voice. During the afternoon a very excellent tea was provided by Sister and the nurses.

ESTHER.

The programme of the concert held in Esther on Boxing Day was perhaps more varied than that seen in any other ward; this did much to relieve the feelings of visitors who had seen one or two other concerts. Major Browne, an old Guy's man, gave a series of conjuring tricks, which appealed particularly to the younger members of the audience. The imitations of Mr. Moore were extremely good, and unlike those of so many others who practise this branch of art, were recognisable. A considerable part of the entertainment was given by some of the Niggers, who, in spite of the strenuousness of the day before, turned up nobly. Mr. Caldecott's "Devon" was much appreciated, and Mr. Laver's "Tony" brought the house down. Mr. Siggs officiated at the piano in his usual able manner.

LUKE AND CHARITY.

Contrary to all custom this concert was held on Christmas Eve and the size of the audience was evident proof of the success of the experiment. Tea was served before the entertainment, so that much annoyance was saved by having no interval, in which one had to see how quickly one could put away one's tea. Mr. Corelli Windiatt (an old patient of Luke) conducted his well-known orchestra, and this proved the most enjoyable item of the evening. Miss Helen Ware recited several stories, which were much appreciated. The singing was of an exceptionally high standard, and this was to be expected, for the majority of the performers were artists well known to all; one has only to mention such names as Miss Winifred Barnes and Mr. Joseph Coyne to exemplify this. Proceedings were brought to an end by Sir Alfred Fripp mounting the platform and thanking all the artists for the kind way they had consented to perform, although they were so extremely occupied throughout the day entertaining other audiences.

MARTHA AND LAZARUS.

The combined concert of Martha and Lazarus certainly proved that two heads were better than one. An unusually large audience was present, and if one may judge by the applause not a single person present failed to appreciate the efforts of the numerous artists.

A sextette of ladies, the Ruggers, opened the performance with two songs; later they sung others, always receiving much applause. The dancing of Miss Doreen Heeper and Miss Daphne Morgan was delightful. Miss Arnold played the 'cello with great skill and feeling. The "Rose of Picardy" was sung by Miss Mead, and left little to be desired. Our local talent was represented by Messrs. Forbes, Coombes, Caldecott, Staley and Laver, all of whom made an enjoyable afternoon even more so. Messrs. Siggs and Kendall accompanied in their usual brilliant way, the latter entertaining the audience with numerous rag times during the interval, when tea was served by the nurses.

Change of Address.

Capt. J. L. Perceval, R.A.M.C.(S.R.), from No. 19 Ambulance Train, B.E.F., to No. 7 Ambulance Train, B.E.F.

Lieut. A. D. Crofts, R.A.M.C., Cambridge Hospital, Aldershot.

Lieut. H. D. Wyatt, R.A.M.C., B.E.F. Egypt.

Corpl. Chas. F. Hawkins, M.M., Stationary Hospital, France.

Lieut. H. F. Stephens, R.A.M.C., M.O. i/c, 14th Divisional Ammunition Column, R.F.A., B.E.F., France.

Capt. Frank Cook, R.A.M.C., S.R., c/o D.M.S., Force D., Mesopotamia.

Lieut. W. H. Ogilvie, late Surgeon to the Urgency Cases Hospital, Revigny, 2nd French Army, to No. 5 General Hospital, B.E.F.

Surgeon N. A. H. Barlow, R.N., Plymouth Hospital, Plymouth.

Surgeon P. S. C. Long, R.N. Hospital, Portland.

J. Elford Dupigny, M.R.C.S., L.R.C.P., L.D.S., 45, Streatham High Road, S.W. 16.

William Bett, M.V.O., Deputy Surgeon-General, from H.M.S. *Excellent*, Whale Island, to R.N. Barracks, Portsmouth.

Appointments.

Medical School Appointments

JANUARY–MARCH, 1918.

Dressers or Clerks in Special Departments:—

A. *Throats* (Mr. Mollison). *Orthopædics.*—Messrs. R. W. Warrick, E. R. Webb and W. H. Simmons.

B. *Throats* (Mr. Layton). *Genito-Urinary.*—Messrs. C. Moffatt, S. Hume.

C. *Children, Eyes* (Mr. Eason).—Messrs. R. Gainsborough, G. V. Richards and G. B. Dowling.

D. *Skins, Nerves, Eyes* (Mr. Ormond).—Messrs. H. F. G. Berncastle, G. F. Peters, R. S. Ralph, C. H. Horwitz, K. Mullen.

Obstetric Dressers.—Messrs. H. M. Brown, H. W. Southgate, A. G. Ord, T. G. D. Bonar, C. T. Helsham, A. W. Cocking (Jan. and Feb.), G. R. Aspinwall (Mr Bellingham Smith); W. H. Cellier, J. Kendall, C. R. Cade, F. Young, I. R. Florence, S. H. Robinson (Mr. Chapple).

Surgeons' Dressers.—Messrs. C. C. Bennett, P. J. Briggs, H. N. Schapiro, W. G. Hay (Sir Arbuthnot Lane); G. A. A. Bradnack, K. M. K. Duff, R. B. P. Lansdown, W. W. Payne (Mr. Dunn); C. V. Brown, L. Lavine, A. M. Mishad, H. S. Morris (Sir Alfred Fripp); H. Ameen, S. T. Barrett, W. R. Carling, M. F. Ismail (Mr. Steward).

Extension Medical Ward and Post-mortem Clerks.—M. Cohen, W. T. Flooks, G. K. Reeves, J. E. Wright (Dr. Hale White); J. G. Barrie, J. V, C. Braithwaite, R. C. B. Ledlie (Dr. Shaw); D. J. O'Meara, S. Rose, B. M. Tonkin (Dr. Fawcett); W. Mark Brown, W. K. McKay, A. E. Sawday (Dr. Beddard).

Assistant Surgeons' Dressers.—Messrs. G. L. Cutts, C. M. Probert, C. H. St. John (Mr. Fagge); S. Cohen, G. H. Howe, G. Massie (Mr. Rowlands); E. E. D. Gray, E. T. Lloyd, N. V. Wadsworth (Mr. Hughes).

Medical Ward Clerks (first three months).—Messrs. M. A. R. Khalifa, M. S. Mahmud, W. A. Turner, E. F. Wilson, W. J. McB. Allan, T. W. Turner.

Surgical Ward Clerks.—Messrs. A. F. Camp, P. Couacaud, G. H. Oriel.

Pathological Assistants to the Demonstrators of Morbid Anatomy.—Messrs. J. V. C. Braithwaite and R. C. B. Ledlie.

Student Assistant in the Bacteriological Department.—Mr. H. W. Southgate.

Clerk in Surgical Out-Patient Department.—Mr. P. L. Richardson.

R.N.M.S.

Temp. Surg. C. M. Ryley, M.B., to Chatham Hospital.

R.A.M.C.

Temp. Lieuts. to be Temp. Capts.—J. F. H. Stallman, D. O. Richards, F. A. Godson.

To be Temp. Lieuts.—H Barber, W. H. Ogilvie.

Officers relinquishing their Commissions.—Temp. Capt. H. Davis.

Territorial Force.

W. B. Buer to be Lieutenant.

A. E. Clark (late Lieut. R.A.M.C.) to be Captain, Hampshire Medical Volunteer Corps.

Papers by Guy's Men.

Lieut.-Col. Alfred J. Hull, F.R.C.S., R.A.M.C.: The paraffin treatment of burns.—*Brit. Med. Journ.*, Dec. 15th, 1917.

Major Herbert French, M.A., M.D. Oxon., F.R.C.P. Lond., L.D.: Dietetic fallacies in connection with glycosuria and albuminuria.—*Journ. of the R.A.M.C.*, Nov. 24th, 1917.

Capt. H. G. Gibson, R.A.M.C.: A note on the occurrence of experimental paratyphoid infection in rabbits, which proved fatal in each case, with lesions resembling those found in man.—*Ibid.*

Marriages.

COOK—REID.—On Dec. 4th, at St. Edmund's Church, Mansfield-Woodhouse, Frank Cook, R.A.M.C. (S.R.), to Sister H. W. Reid, youngest daughter of the late Rev. James Reid, of Co. Cork, Ireland.

SMAIL—SARGOOD.—On the 26th Dec., at St. George's Church, Perry Hill, S.E., by the Rev. J. H. Wesley Kane, M.A., Frederick Andrew Smail, "London Scottish," of Forest Hill, S.E., to Florence Mary Sargood, late "Dental Department, Guy's Hospital," second daughter of Mr. and Mrs. Joseph Sargood, 73, Kilmorie Road, Forest Hill, S.E.

Death.

EDMOND.—On Dec. 1st, killed in action, John Adamson Edmond, M.B., B.S., M.R.C.S., L.R.C.P., Capt. R.A.M.C.

J. J.